ENGINEERING SPECIAL REPORT FOR B&B, ROADMASTERS

September 9, 1968

RAILWAY AGE

THE TRANSPORTATION WEEKLY

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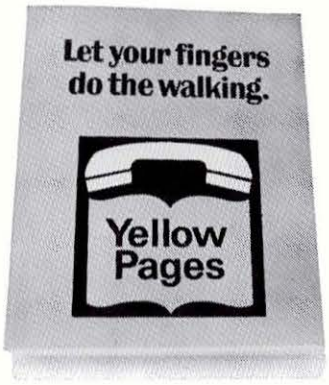

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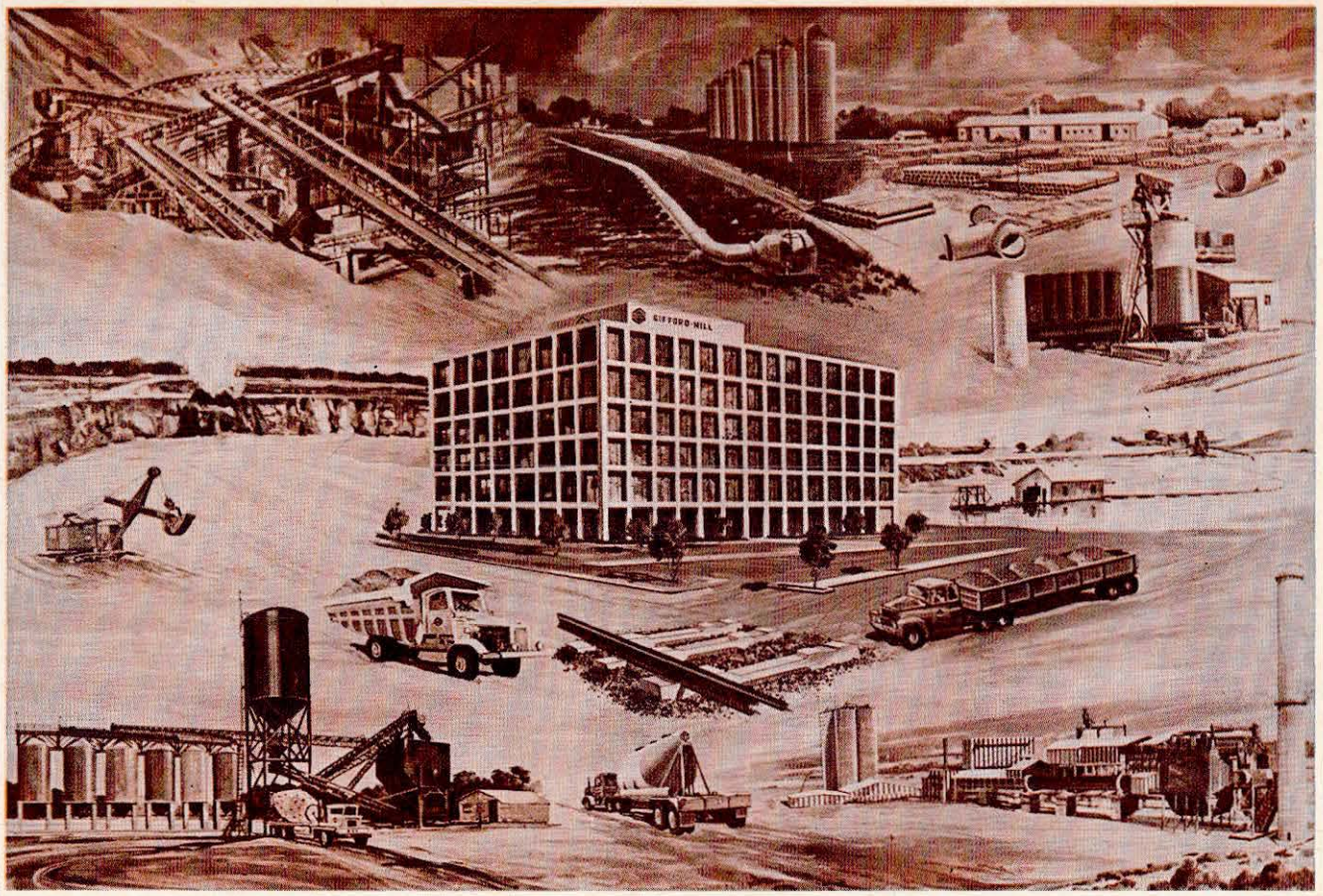

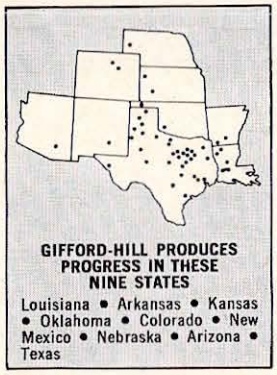

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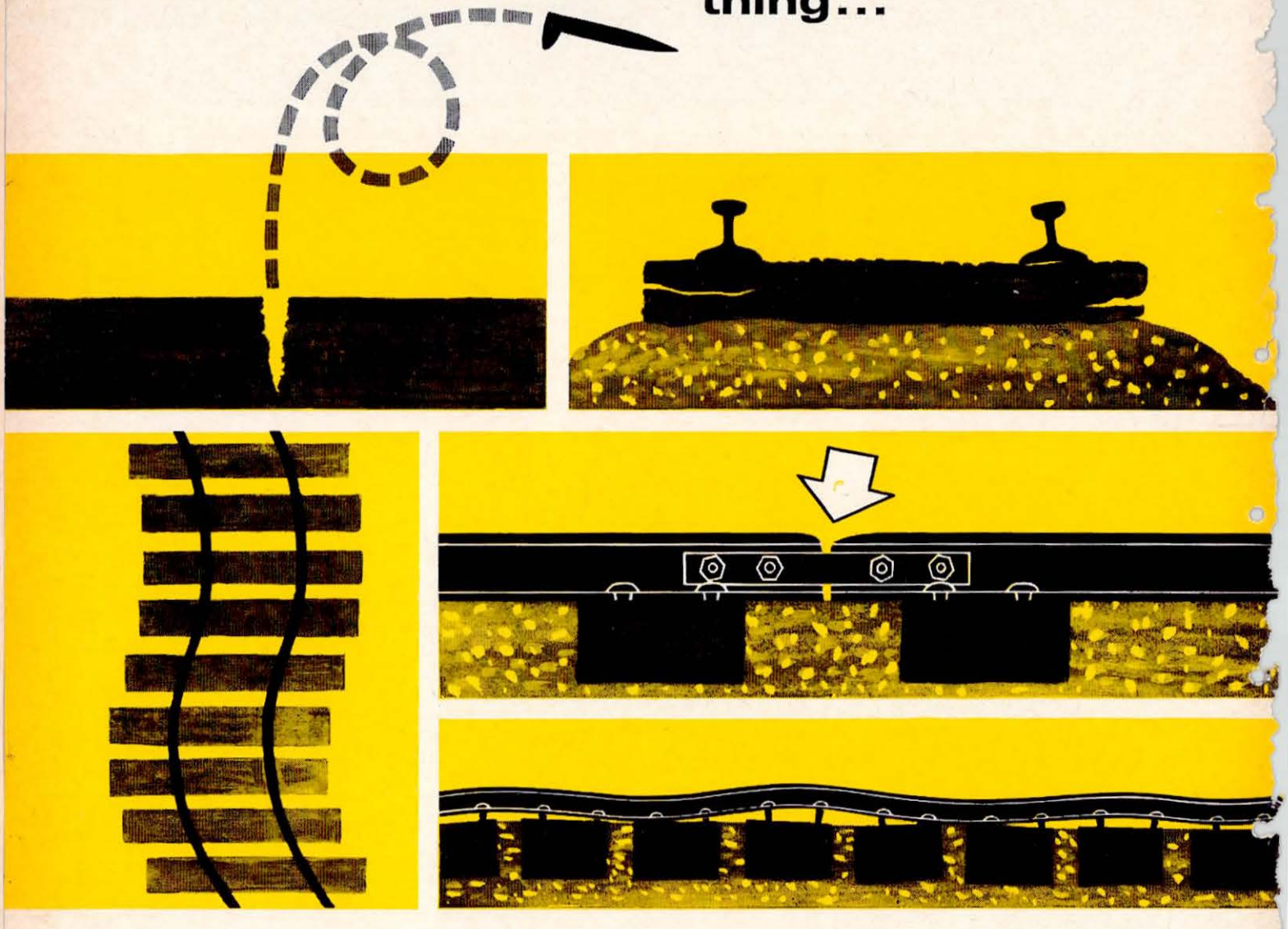

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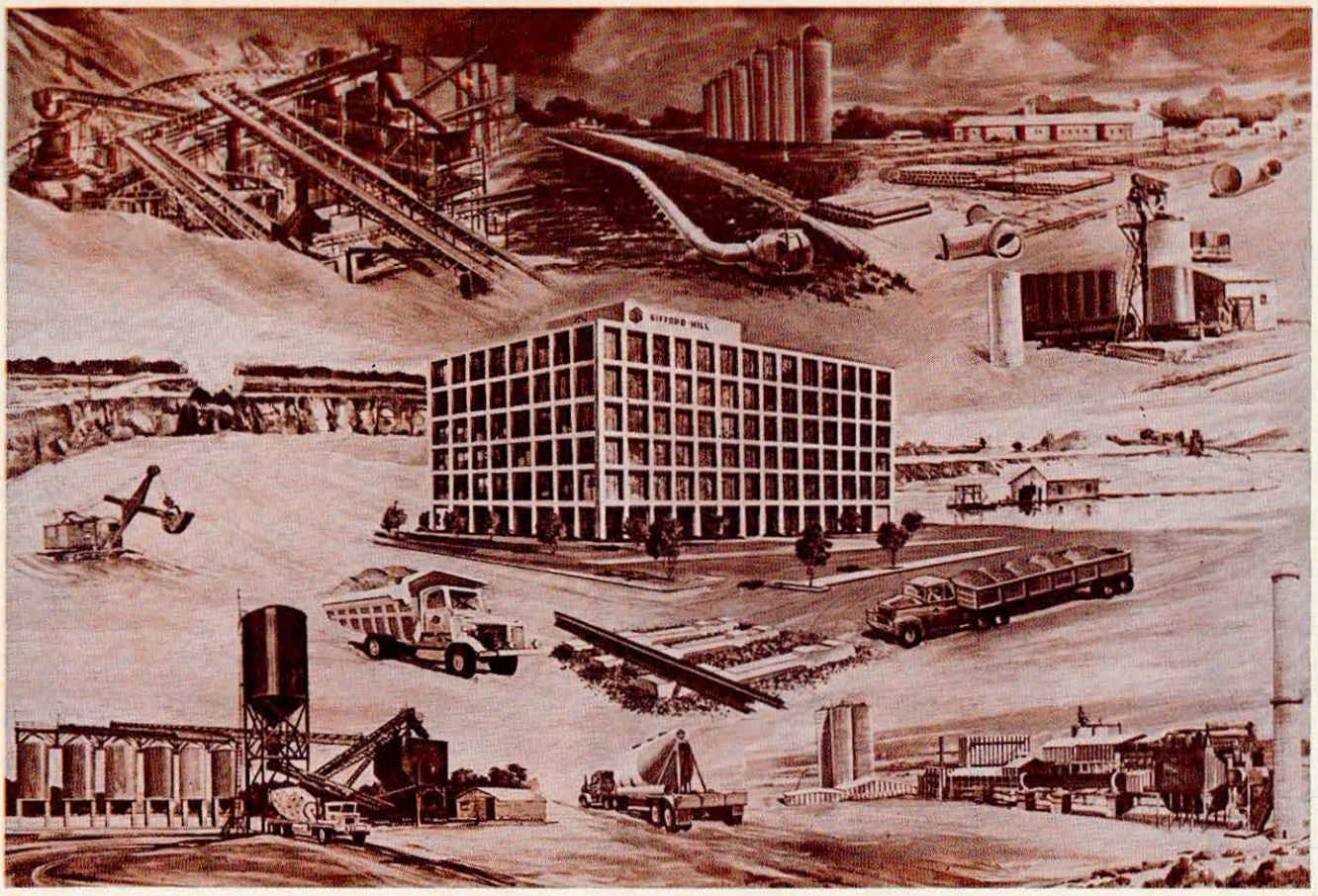

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RAILWAY AGE

Sept. 9, 1968 • Vol. 165, No. 10

THIS WEEK

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The maintenance comeback has been sharp, clear and profitable.

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The new steel posts may last as long as the cars they are put on.

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. . . AND COMING NEXT WEEK

As the AAR Purchases and Materials Management Division meets in St. Louis, Railway Age of Sept. 16 takes a look at EDP and the buyer—and at how the new Division itself has functioned in its first year. And, as the AAR Data Systems Division meets in Chicago, Railway Age surveys the planning now going on among major roads to get ready for the 1970 start-up of industry-wide ACI and TRAIN programs.

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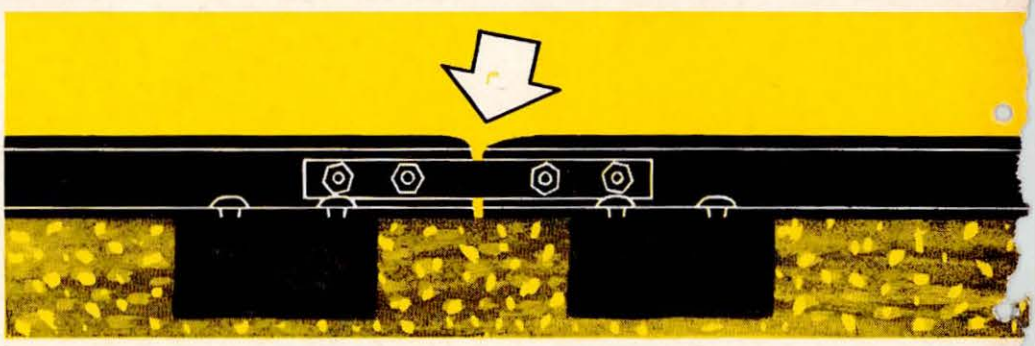

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MECHANICAL MUSCLES®

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SHORT AND SIGNIFICANT

"Search" for another railroad

A "Search" automated tester for diesel locomotives has been delivered to Cumberland, Md., for installation at the shop of the Chesapeake & Ohio/Baltimore & Ohio. While it was B&O which pioneered this concept of quality control and trouble-shooting for locomotive electrical systems, three other roads have previously put in service the production versions of the Search unit produced by California-based Dalmo Victor. Santa Fe, Candian National and Southern Pacific already use these units to verify that their locomotives perform to specification and that wiring and electrical components are within permissable tolerances.

L&N, Monon shareholders OK merger

At special meetings Aug. 28, stockholders of Louisville & Nashville and Monon approved merger of Monon into L&N. L&N stockholders voted for a new class of 2.5 million shares of preferred $35-par-value stock. The first series of this stock will total a maximum 775,000 shares with a $2.10 dividend. Upon merger, each Monon share will be converted into one L&N preferred which then will be convertible into one third of one L&N common share. The railroads' boards approved the merger June 20. Filing for ICC approval will be made soon.

ATSF opens wholly-owned jet-fuel pipe

Santa Fe has opened its first wholly-owned pipeline, a $2.5-million facility for moving jet fuel 108 miles from Amarillo, Tex., to Cannon Air Force Base, N.M. The base will benefit from reduction of costs and manpower, better logistics support because of all-weather delivery, and improved safety from a closed piping system for volatile fluids.

IC Industries takes in Waukesha Foundry

Waukesha Foun Co. of Wauke Wis. last week be came a wholly-owned subsidiary of Illinois Central Industries with the signing of final papers in the acquisition. Assets of Waukesha, a 56-year-old company which makes precision castings and quality pumps, were acquired for 150,000 shares of Illinois Central Industries stock. The firm will operate under the name Waukesha Foundry Co., Inc., with Richard D. Wright continuing as president.

Keystone buys Rockford Bolt & Steel Co.

Keystone Railway Equipment Co. of Chicago has made a cash purchase of Rockford Bolt & Steel Co. of Rockford Ill. Acquisition of the $2-million-yearly-gross manufacturer of standard and special bolts is a further diversification step, says Jay R. Sheesley, Keystone chairman. Previous acquisitions include Superior Welding Co. and Union Iron Co., both of Decatur, Ill. Rockford will function as a Keystone subsidiary. Sale price and terms were not disclosed.

Stanray gets hydraulics manufacturer

In its fourth acquisition move since last December, Stanray Corp. has acquired Remco Hydraulics, Inc., a Willits, Calif., manufacturer of hydraulic cylinders. The acquisition was made for an undisclosed number of common shares. Remco has annual sales of about $5 million. Other recent Stanray acquisitions are Mead Specialties Co., Powerflow Engineering and Equipment Co., and Johnston Industries, Inc.

Recreational park planned in West by Penn Central

The Great Southwest Corporation, a subsidiary of Penn Central, plans to build a $20 million recreational park in the San Francisco Bay area near Oakland, Calif. Construction work on the 147-acre site will begin next summer and the park will open in the spring of 1971. Great Southwest built and operates Six Flags Over Texas, between Dallas and Ft. Worth, Tex., and Six Flags Over Georgia, a recreational park near Atlanta.

MONDAY MORNING REPORT

Transport planks tempt the mind

Both Republicans and Democrats have raised congestion as the major transportation issue. In an appeal to the *public* mind, both promise to relieve jammed facilities and urban corridors. This is an apparent backing away from past appeals to the *transport* mind based on promises to break the congestion behind the congestion—the regulatory roadblocks to integrated transportation.

WHAT THEY SAY

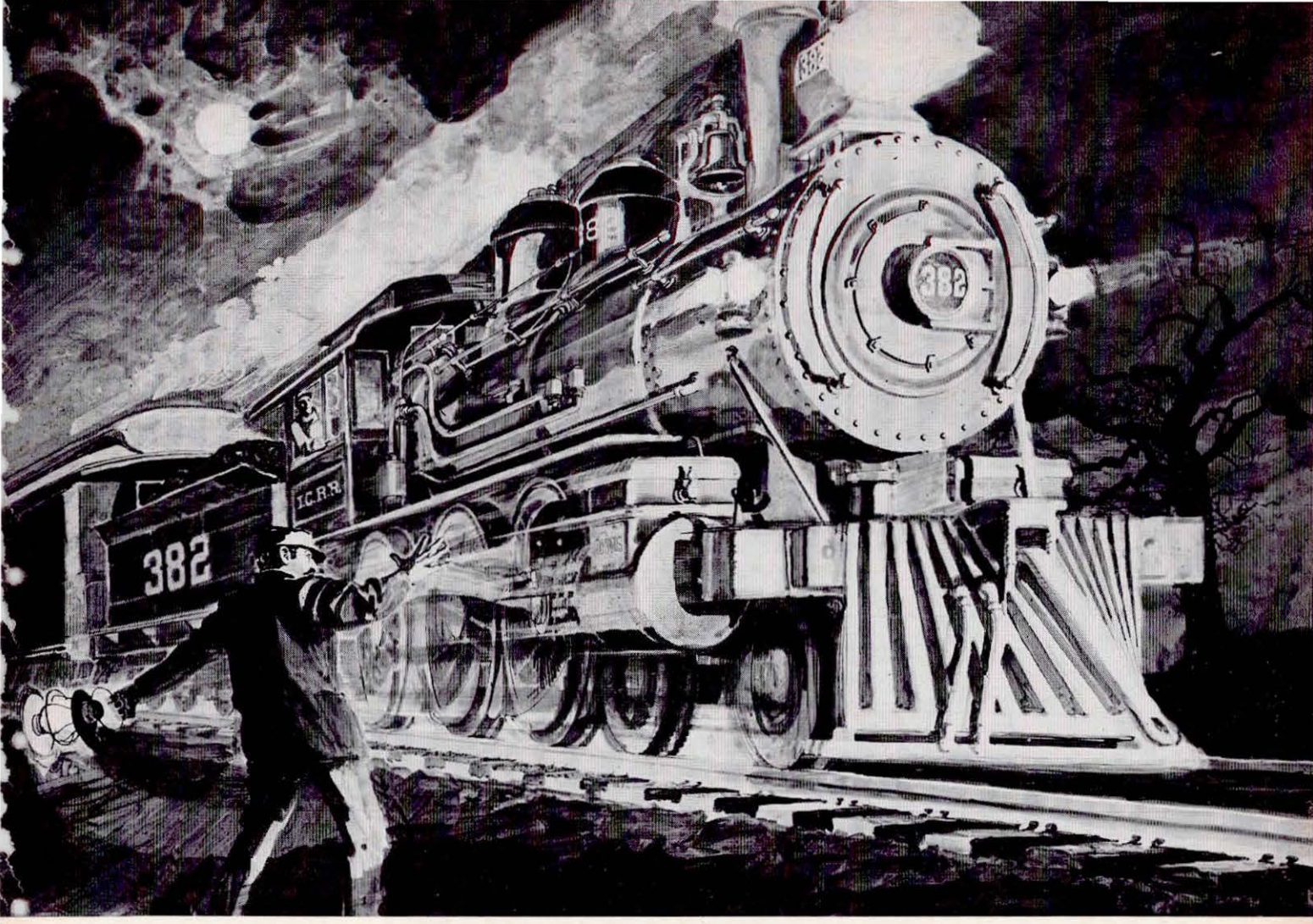
The Republicans blame the "administration's failure to evolve a coordinated transportation policy" for airport delays and for the slow development of high-speed train transportation between major population centers. They promise an "expert evaluation" of the air problem, an effort to make the Department of Transportation the promoter of coordination and the preserver of competition, equitable treatment of each mode, and exploration of the "trust fund" approach to transportation. The Democrats propose a "dynamic partnership between industry and government at all levels" to ease congestion in air and interurban movements. They cite the need for "further strengthening the nation's railroads so they can contribute more fully to the nation's transport requirements," for "local road networks to meet regional requirements," and for modernization of the Panama Canal. Both parties call for revival of America's merchant marine.

WHAT THEY COULD SAY

The planks supposedly are based on the testimony of industry representatives like Thomas M. Goodfellow, AAR president. However, the reflection of what he said is cloudy. Goodfellow suggested wiping out the obstacles to transport diversification through common ownership: "Present diversification policies are obviously discriminatory, one-way restrictions . . . out-dated." He reminded the Republicans that previous platforms had called for competitive integrated transportation under a policy by which each carrier could realize its inherent advantages and full ability to compete. He reminded the Democrats that their 1960 and 1964 platforms had called for changes in transport policy similar to those he advocates.

FINAL DETERMINATION NEEDED

For the *public*—i.e., voter—mind, Goodfellow's testimony would perhaps and unfortunately, mean little. For the *transport* mind—manager and shipper—it's crucial. With Goodfellow's statements in the background, the party transportation planks are just temptations to a final determination of party perception of the problem and of party intent.



Remember her?

During the two brief months that Casey Jones mounted the cab of engine No. 382, the Cannonball Special became a legend in its own time. With Casey at the throttle and 21,922 pounds of traction from her six massive 69-inch drivers, she roared to a reputation as one of the Illinois Central's fastest passenger trains.

On a foggy April morning in 1900 she smashed into the last four cars of a freight in a wreck immortalized by the folk song. After the wreck, which took Casey's life, she was rebuilt and continued her famous career until 1935. Then she chuffed into history with Casey.

There's another kind of history being written today in railroading. It's the economy story of piggyback cars, unitrains, fast, roller bearing freight, and the high-power diesel-electric locomotives that pull them. And Humble is providing railroad people with the modern petroleum products they need.

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to give you the kind of service that
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Humble railroad man is a good
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MOSS-AMERICAN CROSSINGS DO!

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And these smooth Moss-American crossings are extra durable; many are still serving faithfully after 15 and more years; maintenance is practically nil.

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RAILWAY AGE
THE TRANSPORTATION WEEKLY

September 9, 1968

WEEK AT A GLANCE

On the RF&P: Conductors sign, Trainmen sue

Richmond, Fredericksburg & Potomac, one of the six roads under the strongest pressure on the crew-consist issue, had the positive balanced by the negative last week. RF&P reached a two-man-crew agreement with the Order of Railway Conductors & Brakemen. But the Brotherhood of Railroad Trainmen, reacting to the railroad's employee-information program, took RF&P to court with a demand for a restraining order and $500,000 damages. The RF&P agreement with the BRT provides for operation of mainline freight trains with one-and-one crews. Conductors and brakemen are to get $4.50 in added compensation. Meanwhile, RF&P was preparing for a Sept. 6 hearing on BRT's petition.

Reading subsidiary to build containers

Carbuilding operations at the Reading's Reading, Pa., shops are going to have to move over to make room for a new construction activity on the road.

Reading announced last week that it has signed an agreement with Weyerhaeuser Co. to fabricate the wood products firm's plywood-fiberglass cargo containers for eastern seaboard markets. The containers will be fabricated in 8x8x20-foot and 8x8x40-foot sizes, with aluminum, steel, or combination aluminum-steel frames. Ambler Container Co., a Reading subsidiary, will be the builder. Shown inspecting the type of container the company will turn out are; left to right, C. E. Bertrand, Reading president; F. G. Fisher, Reading assistant vice president, operation and maintenance; and H. M. Mulloy, president of Ambler Container. A company in California and one in Japan are also fabricating the Weyerhaeuser units.

Test track planned by Santa Fe, FRA

The Federal government and the Santa Fe have joined in plans to launch a project involving the testing of various new types of track construction in mainline track under high-speed, heavy-duty freight service.

The joint venture was disclosed by Federal Railroad Administrator A. Scheffer Lang in an Aug. 31 address before the National Railway Historical Society at Baltimore. Discussing research projects undertaken by the Office of High Speed Ground Transportation, Lang referred to "plans to join with the Santa Fe in the construction of a special roadbed where new track designs can be tested under operating conditions."

OHSGT Senior Engineer Kenneth L. Lawson later told Railway Age that in response to a proposal made by R. H. Beeder, Santa Fe chief engineer, negotiations on a contract were in process "with every prospect that they will have a successful outcome."

Lawson said the goal is to find a type of track that will be stable over a long period of time while carrying heavy loads at high speeds. End result would be lower maintenance costs. The focus of interest, said Lawson, is the tie/ballast structure, not the rail. Various types of concrete construction and ballast-stabilizing materials will be tested.

About a dozen new concepts are now being subjected to computer analysis. Lawson expects these will be narrowed down to about five. The test track—which may be installed during the spring of 1969—would be an integral part of Santa Fe's mainline at a point in Kansas. It would be 1.8 miles long and would be laid with continuous welded rail. Trackage would be divided among the various types of construction to be tested, with the minimum length being 1,000 feet, and with about 200 feet of standard construction inserted between test sections. Plans are to instrument the test track.

GUS WELTY

LINES ON LABOR

A FEW DAYS OR WEEKS FROM NOW, the National Mediation Board may be faced with another one of those momentous decisions: To cry "emergency"—or to look the other way. In the current Belt Railway of Chicago strike—which began July 29— the NMB has been insisting that there's no emergency warranting a call to President Johnson for a fact-finding board. But what happens if Louisville & Nashville is struck? What happens if Illinois Central is the target, as now seems more likely?

PRECISE PREDICTIONS are hard to make, where the Brotherhood of Railroad Trainmen and its president, Charles Luna, are concerned. But by the imprecise timetable on which such things run, IC is in position to be hit next on the crew-consist issue. The BRT has rejected arbitration, and the NMB—as of Aug. 21—terminated its services. Thirty days from that date, either side is free to resort to "self-help."

THESE DISPUTES involve much more than the usual management-union confrontation. It could be persuasively argued that they go to the heart of (1) railroad survival, and (2) union survival. The BRT could win by losing—and it almost certainly could lose by winning.

IRONY RUNS DEEP. No railroad in the country shows more imagination than Illinois Central in the broad field of new-business development. New business means more jobs, better jobs, jobs with some value, some meaning. Look-ahead union people might be expected to help the business-building/job-building effort. Unfortunately, the thrust of the union crew-consist fight is backward, not forward.

UNION STRUCTURE itself is in question. Today's union member is nobody's slave. Management knows this. Union leadership will find it out. Something is wrong somewhere when union men find it necessary to address a letter to the President of the United States which contains a paragraph like this: "The BRT took a case to the Supreme Court and got a decision that required the railroads to negotiate on a local basis. We demand that our union do likewise and that President Luna, who knows absolutely nothing about the outstanding job we are doing on the L&N, stop his interference in local matters."

MANAGEMENT learned a long time ago that its employees are not chattels, or unthinking dolts, or pawns in some grand game. Indications of dissent, or even of rebellion, now coming from the ranks seem to be telling union leadership that it has the same lesson to learn.

Hiltz issues new call for arbitration

With union power growing, says National Railway Labor Conference Chairman J. P. Hiltz, Jr., "there are situations, and they are growing in number, where the strength of one party to a dispute so outweighs that of the other party as to make the process of collective bargaining a mockery." The railroad industry, he told the Transportation Research Forum's annual meeting in Kansas City last week, offers a "vivid example of imbalance of power. I submit that, while collective bargaining is still needed in the railroad industry, it cannot be a meaningful procedure unless it has a much-needed supplement—the requirement that compulsory arbitration will come into play when collective bargaining fails." If collective bargaining is relied upon as the only mechanism for resolving disputes, he said, and "if under these conditions management is not willing to grant the employees practically everything they ask for, strikes will occur with alarming and increasing frequency."

New TOFC train begins fast runs

Fast piggyback rail service between the New York area and the Southeast enters a new phase this week with the inauguration (Sept. 9) of a new daily TOFC run.

The Seaboard Coast Line working with the Penn Central and the Richmond, Fredericksburg & Potomac, will run trains daily from Kearny, N.J., to Hamlet, N.C., without any switching.

After its departure from Kearny, the train will pick up cars at Philadelphia and Potomac Yard in Washington. At Hamlet, N.C., the train will be divided, with one section going to Atlanta and Birmingham, and the other continuing to Savannah, Jacksonville and south Florida destinations.

The train will leave Kearny at 11:00 P.M. daily (except Sunday) and will arrive in Atlanta at 3 o'clock the second morning, and Birmingham at 6:30 A.M. It will arrive in Savannah at 12:45 A.M., and Jacksonville at 3:45 the second morning.

The TOFC special will stop at major terminals only long enough for inspections and crew changes. "This means," said SCL President W. Thomas Rice, "that trailers loaded in New York or Philadelphia by, say, Monday evening, would be delivered in Atlanta, Birmingham or Jacksonville Wednesday morning."

Precision-engineered by bearing specialists...

Brenco *crown-taper* roller bearings are the most modern of all.

BRENCO, INCORPORATED
PETERSBURG, VIRGINIA

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HOW ERIE LACKAWANNA FIGURES ITS MAINTENANCE COMEBACK

Year	New Stone Ballast (tons)	RAIL LAID—MILES New	RAIL LAID—MILES Usable	TIES USED New	TIES USED Usable	TOTAL TRACK RAISED—MILES 3 Inches	TOTAL TRACK RAISED—MILES 1½ Inches	TOTAL TRACK RAISED—MILES Total Raising	Man Hours*
1960	—	11.140	89.985	124,091	—	45.87	175.48	221.35	3,421,720
1961	—	.965	47.805	57,003	—	—	—	—	2,779,405
1962	—	.635	57.775	3,386	66,056	—	—	—	2,877,019
1963	—	.995	57.040	2,746	117,106	100.50	86.7	187.2	2,910,693
1964	—	2.275	93.410	5,702	203,744	361.70	212.9	574.6	2,762,664
1965	339,261	.446	127.273	177,659	76,361	732.69	—	732.69	2,776,249
1966	332,740	25.81	60.70	257,365	9,624	732.78	—	732.78	2,787,365
1967	365,480	43.65	39.53	312,447	12,720	324.47	279.91	604.38	2,568,792
1968	469,500	40.2	56.8	375,000		453.1	375.7	828.8	

*Includes roadmasters, general foremen and assistants, gang foremen, section foremen, work equipment operators and helpers and extra gang and section laborers.

traffic being routed over the other track.

As they existed last year the detour tie-renewal gangs each included, among the main units of machinery, an RMC Joint Straightener, an RMC BoltMaster, a Fairmont Spike Puller, two Kershaw Tie Saws, two Fairmont Tie-Bed Scarifier-Inserters and two Nordberg Hydra-Spikers. Behind each of these gangs the track was raised and surfaced by a gang consisting of a McWilliams Ballast Distributor, an Electromatic raising, tamping and lining machine, and a Kershaw Ballast Regulator. In 1967 each of these gangs had an average output of 425 ties per day.

● **Changes in 1968.** Effective with the 1968 working season important changes were made in the tie-renewal gangs. Basic to these changes, as described by W. A. Swartz, engineer maintenance of way, was the acquisition of three Kershaw Tie-Injectors and the inclusion of one of them in each of the "detour" tie-renewal gangs. At the same time three machines—a Tie Saw, a Scarifier-Inserter and a Hydra-Spiker —were released from each of the gangs.

Release of the machines from the detour tie-renewal gangs made it possible to create three additional gangs for making tie renewals under traffic on single-track lines. The road already had three such gangs.

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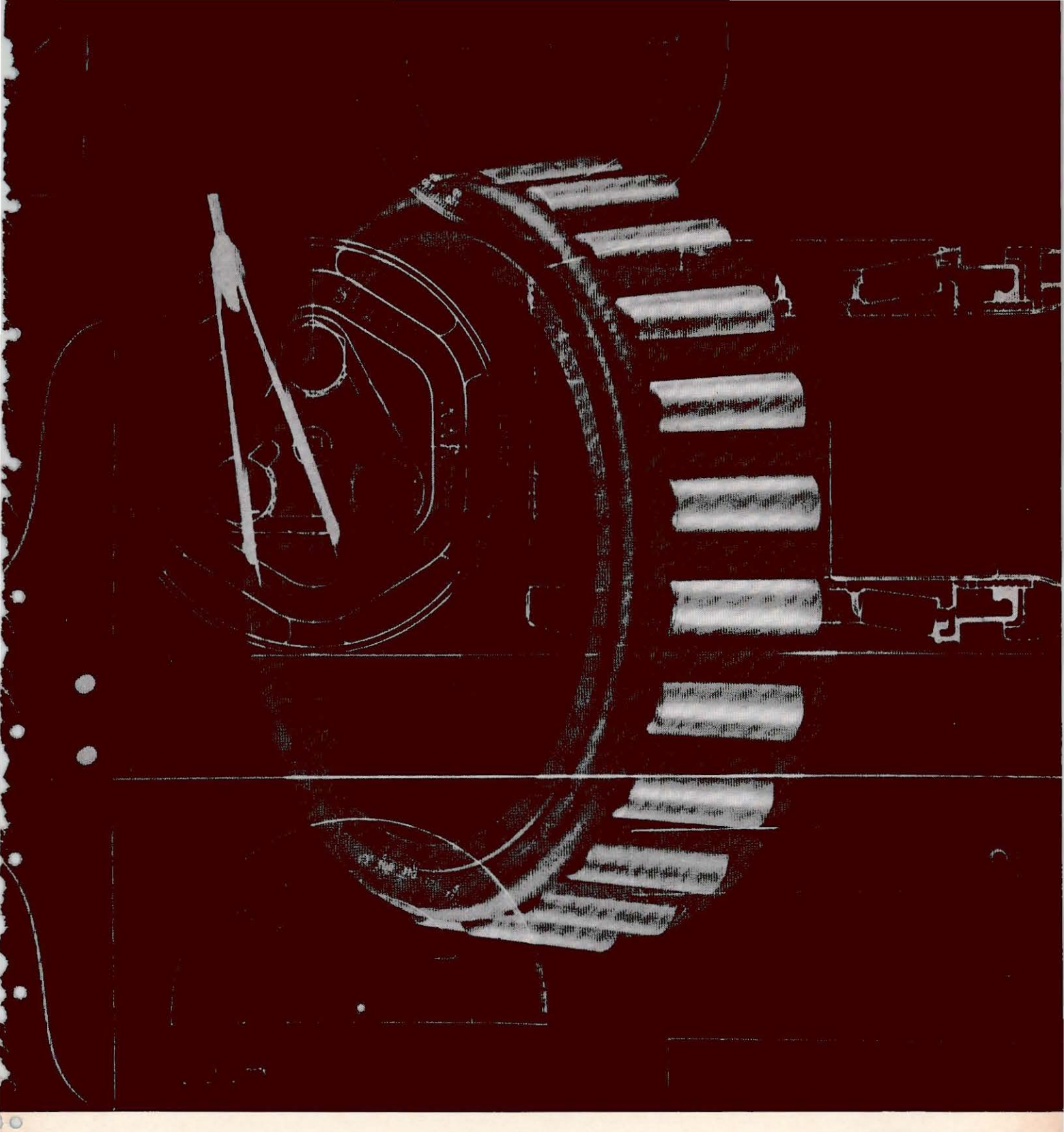

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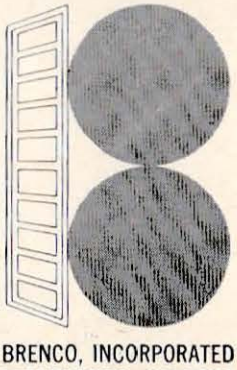

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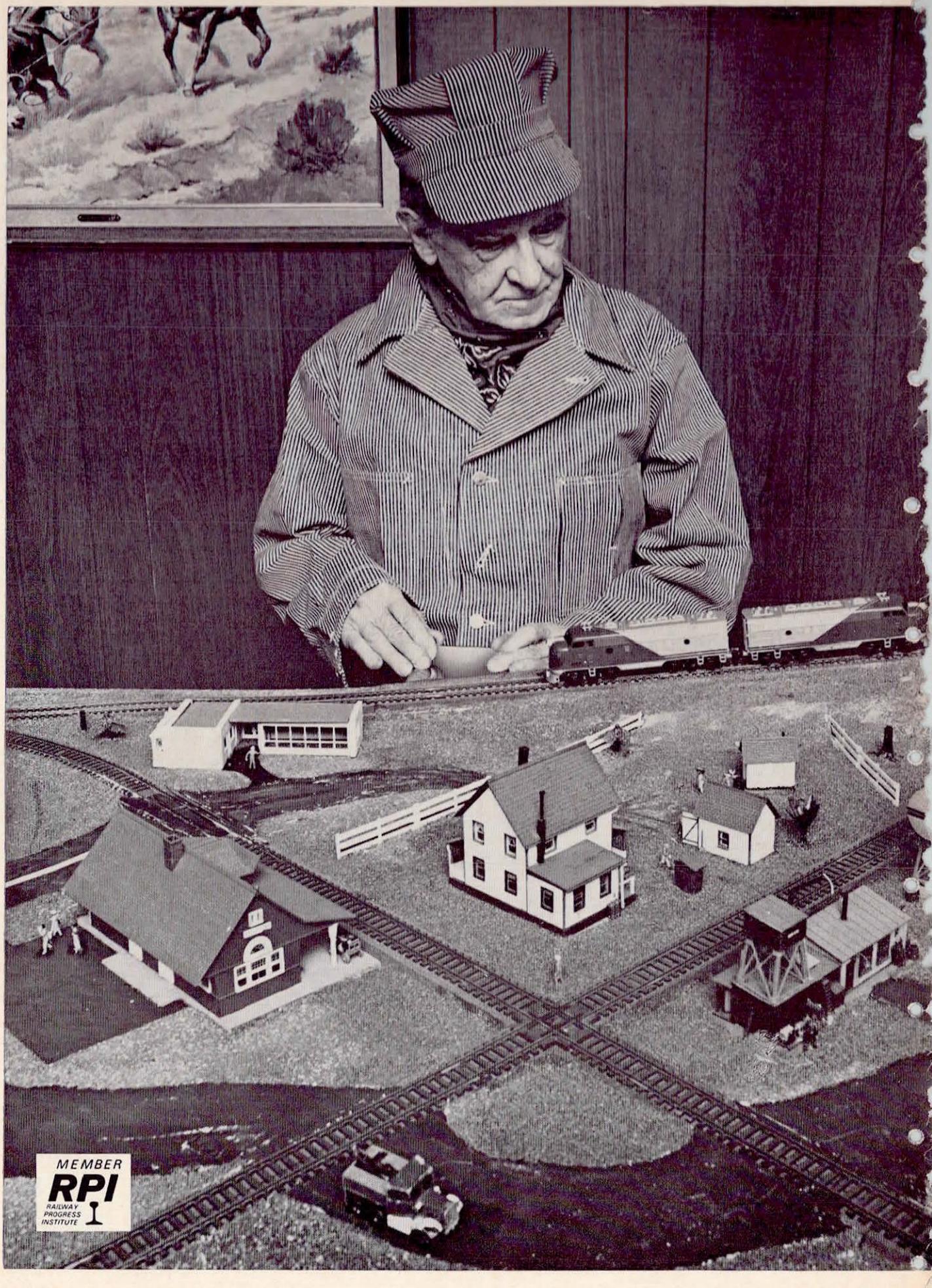
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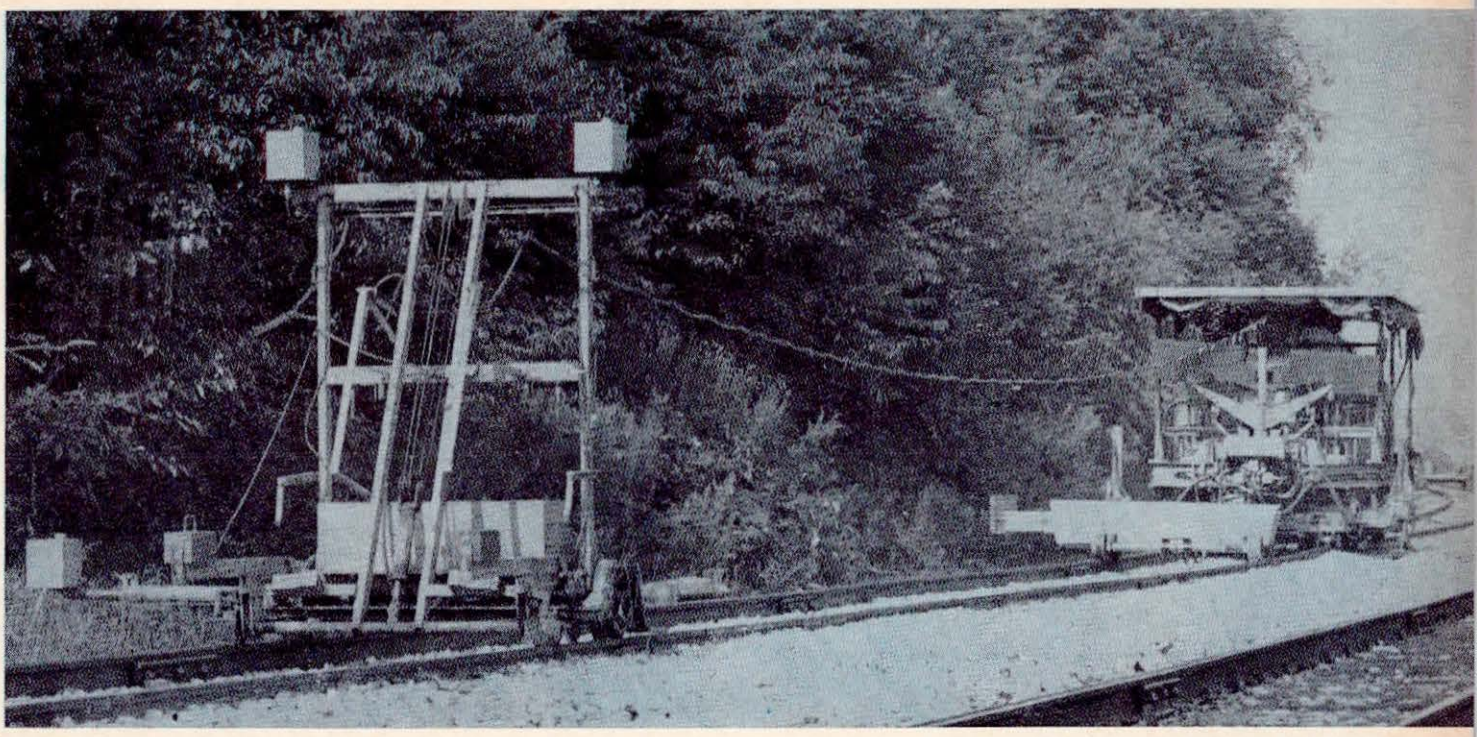


TRACK RAISING, tamping and lining on E-L are done largely with one-man-operated Autojack Electromatic Autoliners.

REBUILDING FROM THE GROUND UP

Erie Lackawanna track maintenance hits full stride

By **MERWIN H. DICK,** Engineering Editor

Perhaps "turnaround" is the way to describe it. Or maybe "comeback" is better. But it's probable no single word can be found that will fully and accurately portray the changes that are taking place in track-maintenance policies and practices on the Erie Lackawanna. There are too many facets involved. They include:

—Large increases the last several years in tie and rail renewals and other forms of track work over the extremely low levels that prevailed during practically the entire first half of the decade.

—The acquisition of an impressive fleet of modern track-maintenance machines for use in carrying out the enlarged track-work programs. From 1964 to 1968, inclusive, the total investment in such equipment has come to $3,587,438.

—The ability to perform greater amounts of work while reducing the total number of man-hours expended.

—A management which holds that present-day conditions, including the practice of using large amounts of costly machinery in track maintenance, favor M/W programs that are relatively uniform from year to year as against a policy that produces sharp cyclical fluctuations in such programs.

• **Merger—and decline.** For the complete story it's necessary to go back to 1960. On Oct. 16 of that year the Erie Lackawanna was born through the merger of the Erie and the Lackawanna. It was also the beginning of a period during which operating revenues of the new company went into a sharp downtrend. From $220 million in 1960, operating revenues dropped to a low of $206 million in 1963. Deficits racked up in these years were staggering.

Following 1963 a reversal took place in operating revenues. By 1966 they had recovered to $236 million and the road was in the black. However, 1967 saw another slump in revenues to $224 million and EL was back in the red.

The period of low revenues was also

Conventions kick off this week

The fall season of railroad conventions gets into full swing in Chicago this week with concurrent meetings of the Roadmasters' and Bridge & Building Associations. Sessions will be held at the Conrad Hilton Hotel, Sept. 9-11. Joint sessions are scheduled Monday morning, Tuesday morning and Tuesday evening. Separate meetings are on the docket Monday afternoon, Tuesday afternoon and Wednesday morning.

• **JOINT SESSIONS.** At an opening meeting on Monday, AAR President Thomas M. Goodfellow will speak on the topic, "Bright Stars Above—Puddles in the Road." An address by Southern Pacific President B. F. Biaggini will be on the subject, "M/W Budgets are Everybody's Responsibility, Especially Yours." Also scheduled is an address by Dr. Carl Winters of General Motors, "Your Human Relations are Showing."

Tuesday morning's joint meeting will feature addresses by W. H. Moore, operations vice president of the Southern, "Building Railroad Profitability Through Sound Maintenance Practices"; E. Q. Johnson, chief engineer, Norfolk & Western, "Your Association and You"; and Mac E. Rogers, director of the Bureau of Railroad Safety, Federal Railroad Administration, "The DOT View of Railroad Safety, and What to Do About It."

The annual banquet of the two groups is scheduled for Tuesday evening.

• **ROADMASTERS.** President W. J. Jones of the Roadmasters will open that group's session Monday afternoon. Reports will be heard from committees on ties, ballast and rail. At a Tuesday afternoon session, reports will be presented on track maintenance, track inspection, and surface grinding. CF&I Steel Corp. will show a film, "Rails to Go." The Wednesday morning session will feature reports on communications, and machinery, and a motion picture, "That We Might Live," to be shown by the Union Pacific.

• **B&B.** Bridge & Building sessions open Monday afternoon with an address by President Joel W. DeValle. Members will hear reports on "in-place" treatment of timber bridges, new work materials, repairing and replacing expansion rollers under bridges, and will hear an address on corrosion protection by an officer of Zinc Institute, Inc. There will also be a presentation on high-strength Huck fasteners.

More committee reports are on tap Tuesday afternoon—on tools and equipment, heavy construction tools, and replacing of timber trestles with steel and concrete structures. On Wednesday, members will hear an address, "How We Stabilized the Potrero Hill Tunnel," by SP Chief Engineer H. M. Williamson San Francisco).

a period of deep cuts in M/W work. During several years, the amounts of new ties and rail applied in the tracks (see table p. 20) were almost non-existent, although to some extent the deficit was overcome by inserting quantities of relayer rail and used ties, obtained largely from abandonment of a section of Lackawanna main line between Corning, N. Y., and Buffalo.

• **Turning point for M/W.** Along with the recovery in revenues there occurred a turning point in the fortunes of the maintenance-of-way department. By this time R. F. Bush had become chief engineer, having assumed that position on Oct. 1, 1964. In planning his track-maintenance programs Bush was governed to a large extent by a goal that had been established by management. It was to get the road's main line between New York and Chicago, mostly double track, in shape for handling freight trains at 60 mph. Actually, this line, 977 miles long, extends from Hoboken, N. J., on the west bank of the Hudson river opposite Manhattan, to Hammond, Ind. From the latter point the EL operates into Chicago over the Chicago & Western Indiana.

Faced with the task of upgrading the road's entire main line and of keeping it at the higher standard of maintenance, Bush decided it would be necessary to embark on a program to place tie and rail renewals and track surfacing on a cycle basis. For the double-track main line he established a cycle of 5 to 6 years for tie renewals with two intermediate surfacings. On single-track main lines the cycle for tie renewals is four years with one intermediate surfacing.

Bush is convinced that the cycle plan is necessary if the desired track condition is to be achieved and maintained with a maximum of economy. His objective is to establish his tie and surfacing programs at a level that will bring an additional mileage of track under the cycle plan each year. Already, he says, about 400 miles of track in both the eastbound and westbound main lines have been brought up to the standard required for 60-mph speeds.

• **Bigger programs for '68.** The goal for upgrading the EL's main tracks has meant sharply increased M/W programs. The program for 1968 was made the subject of a recent statement by John P. Fishwick, the road's chairman and chief executive officer. Main points made in the statement:

—The 1968 program calls for an expenditure of almost $24 million compared with an average of $18.5 million spent in each of the past seven years.

—Quantities of work programmed for 1968 include 97 miles of rail, of which 62 miles will be continuous welded rail, the insertion of 375,000 crossties, the raising of 829 miles of track and the placing of 469,500 tons of new ballast. All of these quantities are in excess of those for previous years.

—Twelve gangs of seven men each will be renewing a total of 352 grade crossings at various locations.

The fact that Fishwick issued the statement on the 1968 work programs, indicating approval of them, has special significance since he didn't assume his position on the EL until April 1 of this year, months after the work programs for the year had been established. April 1 was the date on which EL became a subsidiary of the Norfolk & Western. This came about as a result of efforts of EL, the Boston & Maine and the Delaware & Hudson to be included in the N&W system. To effect ownership of the smaller lines N&W created Dereco, Inc., a wholly-owned subsidiary, for the purpose of acquiring all the stock of the smaller companies.

Fishwick is senior vice president of the N&W and president of Dereco. He was appointed also chairman and chief executive officer of the EL to represent the interests of the N&W in the management of its new property. (For the same reason he has assumed the post of president of the D&H which is now also a subsidiary of the N&W through ownership of its stock by Dereco.)

• **Making up for "non-work."** For one who admits he knows little about track, Fishwick appears to have a strong appreciation of the need for adequate track maintenance. On assuming his position on the EL, and after taking a close look at the 1968 work programs, he put his stamp of approval on them. In an interview he made a special point of calling attention to the fact that the 1968 programs call for greater amounts of new rail renewals and crosstie insertions than were made during the entire period from 1960 to 1965, inclusive. "We've still got some work to do," says Fishwick, "but at least we are making up for some of the non-work of those years."

But Fishwick's ideas go much further than merely making up for past deficiencies. "What we are trying to do is to build up the property into a first-rate competitive railroad," he says. In attaining this objective he expects the M/W ratio will be around 12% this year due to the enlarged work programs. And he is determined to complete these programs regardless of what happens to business.

What happens then? What will be the management attitude toward M/W expenditures when the properties have been placed in a satisfactory condition? Fishwick sees M/W expenditures dropping back to a somewhat lower but adequate level, with the M/W ratio settling back to about 10%. He anticipates the 10% ratio can be maintained

partly through increased business and partly as the result of greater efficiency on the part of the M/W forces.

● **Getting behind is costly.** Fishwick has some interesting ideas about M/W expenditures. "While I am very net-income conscious," he says, "I don't think we should consider net income for just a month or a year. We need to take a long-term view of net income. I think it costs more in the long run when you get behind in track maintenance with the idea of making up the deficiency in the future. At the same time I don't believe in gold-plating or over-maintaining a railroad."

While recognizing that the railroads are a cyclical industry Fishwick doesn't believe that track work should necessarily be cut back when business is in a sinking spell. His reasoning is that it is actually more economical to do track work when business is down because then the work is subject to fewer interruptions due to passing trains. "The main thing is the amount of productive time you get, not how much time you have a gang on the track."

● **Changing economics.** In Fishwick's opinion economics are now more strongly than ever in favor of a policy of flattening out the ups and downs of maintenance expenditures. This situation, he maintains, has been created largely as a result of the increased use of costly machinery in track-maintenance operations. "It's expensive," he says, "to allow this equipment to lie idle."

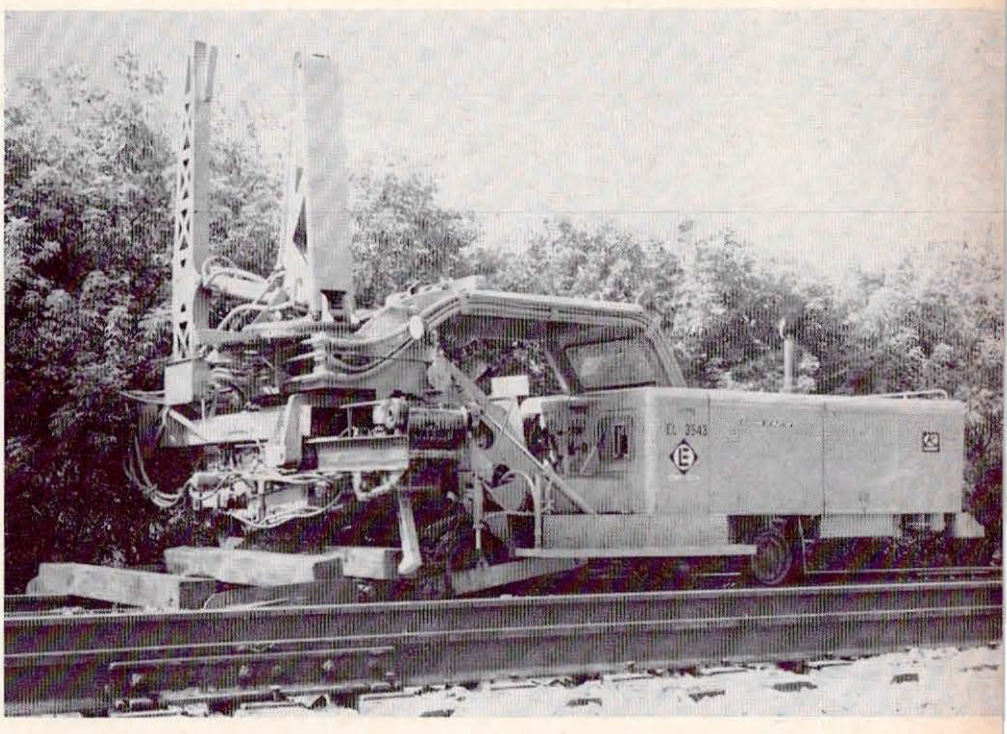
He also points to the difficulty of getting trained employees to operate today's machines, noting that "you just can't pick up such men any time you need them."

Backed up, as they are, by a green-light signal from management, Chief Engineer Bush and his staff in recent years have been acquiring increased amounts of modern track machinery, taking advantage of the newer machines as they are introduced. Their objective is to beef up both the productive capacity and the efficiency of their forces. An example of what they have been doing in this area is provided by the action taken with regard to tie-renewal operations.

For making main-line tie renewals the EL, by 1967, was using three highly mechanized gangs. These gangs operate under the so-called "detour" system, which means that, using temporary crossovers where necessary, a section of track in double-track territory is turned over for occupancy of the track forces during working hours, with revenue

THE BOSSES—AND THEIR MACHINES

FIRST-RATE COMPETITIVE RAILROAD is the goal of John P. Fishwick (seated), Erie Lackawanna chairman and chief executive officer, and R. F. Bush, the road's chief engineer.



M/W MACHINES RECENTLY ACQUIRED by the Erie Lackawanna include three Kershaw Tie Injectors, which pick up ties and insert them in the track.

RAIL-LAYING MACHINES used on the E-L include this Schield Bantam on/off track crane which picks up welded rail strings and places them on the tie plates.

HOW ERIE LACKAWANNA FIGURES ITS MAINTENANCE COMEBACK

Year	New Stone Ballast (tons)	RAIL LAID—MILES New	RAIL LAID—MILES Usable	TIES USED New	TIES USED Usable	TOTAL TRACK RAISED—MILES 3 Inches	TOTAL TRACK RAISED—MILES 1½ Inches	TOTAL TRACK RAISED—MILES Total Raising	Man Hours*
1960	—	11.140	89.985	124,091	—	45.87	175.48	221.35	3,421,720
1961	—	.965	47.805	57,003	—	—	—	—	2,779,405
1962	—	.635	57.775	3,386	66,056	—	—	—	2,877,019
1963	—	.995	57.040	2,746	117,106	100.50	86.7	187.2	2,910,693
1964	—	2.275	93.410	5,702	203,744	361.70	212.9	574.6	2,762,664
1965	339,261	.446	127.273	177,659	76,361	732.69	—	732.69	2,776,249
1966	332,740	25.81	60.70	257,365	9,624	732.78	—	732.78	2,787,365
1967	365,480	43.65	39.53	312,447	12,720	324.47	279.91	604.38	2,568,792
1968	469,500	40.2	56.8	375,000		453.1	375.7	828.8	

*Includes roadmasters, general foremen and assistants, gang foremen, section foremen, work equipment operators and helpers and extra gang and section laborers.

traffic being routed over the other track.

As they existed last year the detour tie-renewal gangs each included, among the main units of machinery, an RMC Joint Straightener, an RMC BoltMaster, a Fairmont Spike Puller, two Kershaw Tie Saws, two Fairmont Tie-Bed Scarifier-Inserters and two Nordberg Hydra-Spikers. Behind each of these gangs the track was raised and surfaced by a gang consisting of a McWilliams Ballast Distributor, an Electromatic raising, tamping and lining machine, and a Kershaw Ballast Regulator. In 1967 each of these gangs had an average output of 425 ties per day.

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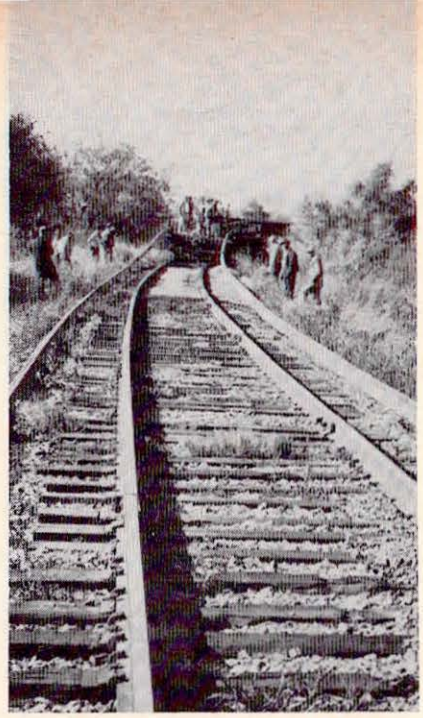
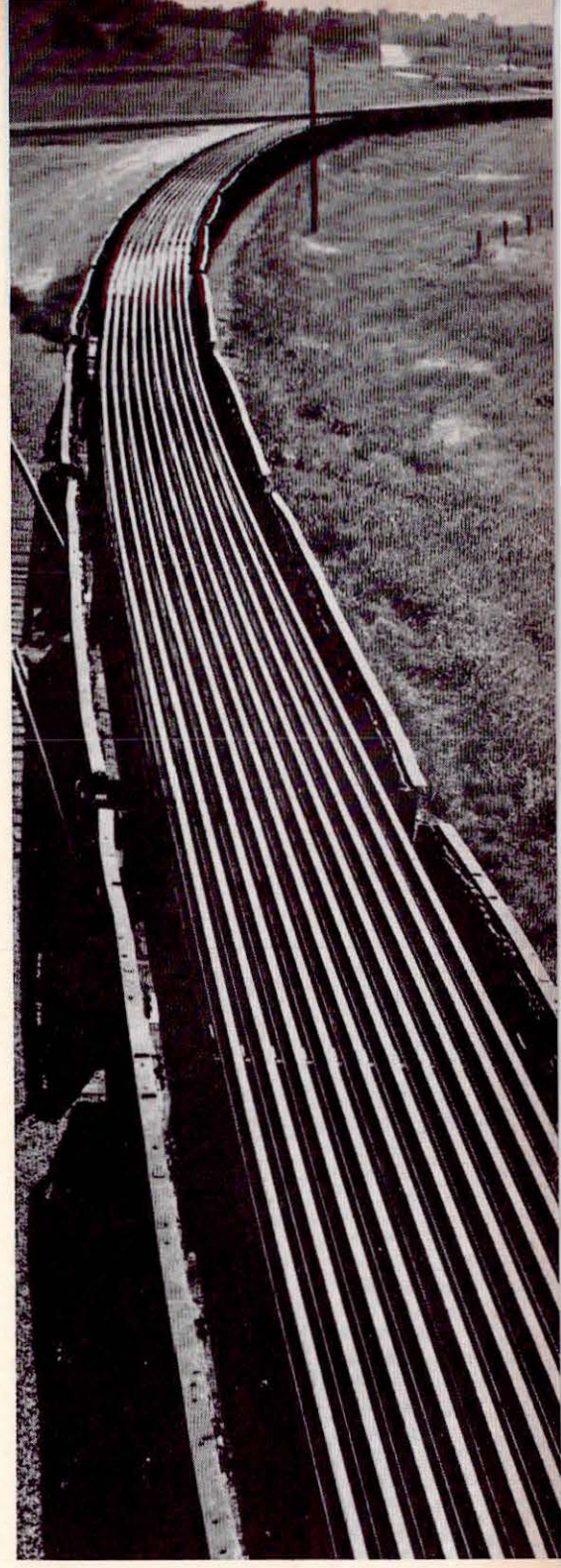
REBUILDING FROM THE GROUND UP



FULL REPLACEMENT of old track, which can fall apart under a standing-still train, will cost the Missouri-Kansas-Texas as much as $30 million.



CONTINUOUS WELDED RAIL, part of the engineering cure for Katy's decadence, moves in to provide higher speeds and dependable service.

Katy heads toward the profit zone

By **FRANK MALONE,** Western Editor

Look around the Missouri-Kansas-Texas railroad these days, and you get one clear impression—1969 looks like the year of the Katy comeback. Everything in 1968 adds up to a final conditioning for a drive toward the profit zone.

Where do you look to get this impression? At things like physical features, traffic and revenue figures, customer attitudes and employee morale. All are indicators of Katy's impending return to the ranks of money-making railroads. The company's place there may be near the bottom, and it may be shaky. But the internal shape of the longtime loser has grown strong enough that only an outside force can cool its momentum and bounce it from the 1969 winners' column.

• **The answer: Engineering.** What's behind the rally of a railroad that just three years ago, according to its president, John W. Barriger, could derail a standing-still train? Is the answer marketing? Super freight trains, electronic yards, computerized operations, or microwave communications? Emphatically, no. Katy has none of most of these and little of the others.

The answer is less sophisticated, but more basic. It's engineering, the keeping-up of the fixed plant. That shouldn't surprise anyone, because Barriger, the man who is scrapping Katy's sad past, is an engineer himself.

"The first thing we had to do was fix up the railroad so it could run trains again," Barriger says. When he came on in early 1965, the high cost of under-maintenance was clear. Ancient, neglected track simply would fall apart under the weight of freight trains, moving or not. The railroad was deep in the red, and shippers were looking for alternate routes. Barriger realized that upon upgrading the fixed plant depended two other parts of his program —to get good equipment for the fixed-up railroad to run, and to get back lost business for the equipment to carry.

Fixing up the road to run trains meant catching up on 10 years of deferred maintenance for both track and equipment. For track, it meant re-surfacing, re-ballasting and re-lining nearly

all Katy mileage. It also meant replacing more than 400 miles of too-light 90-pound (and less) rail with 115-pound rail. This isn't all done yet, but it's far enough along that the other things are coming, too.

• **Break-even, almost.** Barriger forecasts final 1968 revenue of $65 million, which could provide the first near-break-even year since 1961, on a substantial gain over the 1967 revenue of $57 million.

But 1969 is the target of Barriger's optimism. He says the railroad needs $66-$67 million to break even, and next year's revenue will reach $70 million. "Our job has been to get the railroad up $5 million a year in gross," he says. If Katy fails to gain like that, it won't be Katy's fault, Barriger adds. It will take an external cause like a recession: "I don't think we could live through that; we'd go bankrupt, especially if it lasted a year."

For the first six months of 1968, Katy showed operating revenue of $33 million, compared with $28.5 million in first-half 1967. This represents a 17.4% rise in revenue per car.

What about first-half net? Katy made a small profit ($11,000) in the first quarter, but returned to the loss column in the second because of extraordinary operating expenses. Net-income deficit for first-half 1968 was $220,000, compared with a $2.2-million deficit in first-half 1967. However, this represents an 89.9% improvement. Barriger now forecasts net 1968 losses of $1.8 million, which still will be a great improvement over the 1967 net loss of $10.4 million.

• **Some engineering figures.** Engineering cost figures tell the story. Says James T. Hunter, Katy chief engineer: "We're doing now what we wouldn't do, before Barriger—spend money. We're spending it profusely, but wisely. The money has been applied, in the engineering sense, principally to the basic physical items essential to the operation of trains—rail, ties, and ballast." Barriger adds, "We're spending every penny on track that we can without risking bankruptcy."

Total maintenance-of-way expenses for 1968 will amount to an estimated $10 million, or an 17% ratio-to-revenue, according to Hunter. In 1967, Katy spent $10.3 million, for an 18% ratio. In 1966, the figures were $10.8 million and 19.7%. Katy now has brought 70% of its lines "up to the standards of normal trackage," Hunter says. The upgrading program was designed to cover 400 miles each year. It's carried out through deployment of three major tie gangs of 18 men each and a fourth gang of 12. The cost for each gang alone is $60,000 a month (wages, machinery, fuel and materials). Included in upgrading is installation of 400,000 new ties each year.

As of July 30, Katy had spent $5.4 million for maintenance-of-way. This included about $2.5 million for track laying, surfacing, ballasting, and for ties —broken down as follows: laying and surfacing, $1.6 million; ballasting, $102,000, ties, $855,000. In 1967, Katy spent $4.4 million for these track items alone, and in 1966, $6.2 million.

"Our job has been to get the railroad up $5 million a year in gross."

JOHN W. BARRIGER

Also in the track program is replacement with continuous welded rail of rail that's too light for Katy's new standards. This is rail weighing 60 to 90 pounds. Three replacement jobs are set for completion by the end of 1968. They'll cover nearly 40 miles. In 1967, 16 miles of light rail were replaced, and 10 miles in 1966. While this adds up to a small total, the work is significant because ". . . priority of attention was given to segments of the lines of principal traffic importance and greatest need from the standpoint of accident avoidance," Barriger says.

However, the remaining segments of light rail are part of important routes between St. Louis and Parsons, Kan., and between Houston and Taylor, Tex. With the exception of the rail, these lines have undergone full rehabilitation, and permitted speed on most of the 90-pound rail has increased from as low as 25 miles per hour to 45.

• **Equipment: "In hand."** Concerning equipment renewal, Barriger has this to say: "We've got the equipment program in hand. The car program's done. The locomotive program is 40% complete, and the remainder will cost $17 million and take two more years."

Barriger's car program called for replacement of half and rebuilding of half. During 1967, 2,595 new and 702 rebuilt freight cars entered service. With 11,144 freight cars on Katy's roster, Barriger is getting close to his goal of 12,000. Since 1965, new cars have totalled 3,800, and 1,900 more are coming through 1968. Maintenance-of-equipment costs dropped from 19.6% of revenue to 16.2% in 1967. In December 1967, Katy for the first time in 30 years became a credit-per-diem railroad. Total cost of the car program, including buying, leasing and overhauling, stands at more than $80 million.

Katy now is taking delivery of the first of 21 locomotives on order for 1968. In 1966-67, 26 new locomotives were acquired. The remainder of Katy's 183 locomotives (not counting 1968 additions) have undergone full overhaul. Total locomotive-program costs exceed $10 million, so over-all Katy expenses for new equipment total more than $90 million.

"This total exceeds 150% of Katy's 1967 gross revenues. Acquisition within three years of new equipment representing the equivalent of one and one-half years' gross revenue is probably the largest car and locomotive replacement program ever undertaken by any railroad, measured in relation to its size," Barriger says.

He adds: "By the end of 1968, Katy's repair and acquisition program that began in 1965 will have provided it with a fleet of freight cars that actually exceeds the average number of railway-owned freight cars continually in use on line. Therefore, it is a net contributor on balance to the freight car fleet of the United States—a position that the Katy has never before occupied in its entire history."

The new cars and power are well-received by all Katy personnel, but especially by the operating people. Billy R. Bishop, general manager, says: "I would guess that we once had as bad a safety reputation in the eyes of the ICC as any railroad in the country. That situation has been completely reversed. Now we have one of the best records. For example, we've reduced our engine-failure rate from 12 a day to seven a month, and our bad-order ratio from 26% to 4.3% We'll soon get that down to 2.5% to 3%."

• **Customer-comeback, too.** What about the third part of the Barriger plan —getting back lost business? He says, "Traffic is coming back about on schedule. Katy is, for the first time in history, fulfilling its car-service responsibilities to its customers." He has the first-half revenue figures to back his statement that "The $65-million target of 1968 gross revenues is official expectation, and with a little improvement in business, we could go up to $66 million."

One Katy customer for whom "fulfilling car-service responsibilities," is welcome is Okay C Corp. of Dallas. The company has a subsidiary, Oklahoma Cement Company whose plant in Pryor, Okla., depends completely on Katy for transportation rail. Julian L.

What a great story the railroads have to tell!

Example: only trains and pipelines, of all forms of transport, are "guided movement" systems. Guided movement is what makes automation possible. Automation is what the industrial future is all about.

Truly, if the train had come along after the car, truck and plane, it would have been hailed as a great step ahead.

Here, half size, are some of the ads Railway Age has been running to help tell America the tremendous railroad story.

The lid's off on a new railway age

That hooded flatcar going together is part of it. It's a 100-tonner, reflecting the trend toward higher capacity cars. It's tailor made to carry coiled steel for automobile production.

Computerization is part of it. Running a railroad is vastly more complicated than just about any other business. (Maybe as much as a rendezvous in space is more complicated than putting the 3 ball in the side pocket.) If today's railroads didn't have the computer, they would have to invent it.

Ingenious new maintenance of way machines are part of it. So are the great new powerhouse locomotives, the radical new unit trains, new developments in piggybacking, new containerization, new communications, new loading and unloading. . . .

In railroading, it's new, new, new—and where railroaders get the news first is in weekly Railway Age. What a place to talk about what's new in *your* line!

Be part of the weekly excitement in **RAILWAY AGE** *the transportation weekly*

The train idea in a nutshell: one "driver" for 1,800 cars

Time was when it took 1,800 drivers to get 1,800 cars out of Detroit. Bumper hitches cut it to 900 drivers. Trailer trucks cut it to 300 drivers.

Then the railroads put their thinking caps on—and out came new cars, new loading ideas, new marketing ideas—all flowing out of the basic train idea itself.

What is the train idea?

Manpower efficiency: A multiplicity of towed cars, with one "driver" at the controls up front.

Volumetric efficiency: For each cubic inch of displacement, there is only about half as much opportunity for cylinder wall friction in a giant railroad diesel as in a typical truck engine.

Rolling efficiency: nothing travels so easily as a steel wheel rolling on a steel rail.

Aerodynamic efficiency: Every car in a train "runs interference" through the air for the car just behind it.

Guidance efficiency: Scientists struggle to develop guidance systems for cars and trucks (electronic guidelines buried under pavement?). But guided movement is built right into trains with the rails they ride on.

Today, new developments are making the train idea look greater than ever. To giant new unit trains—that stretch out to carry 1,800 or 2,000 automobiles or shiploads of coal or grain—add:

—a broad new spectrum of specialized cars, such as the triple-decker auto rack car above;

—ingenious new maintenance of way machines that do everything but talk;

—new sensory devices, controls, signalling, communication, computerization. These are fast giving a railroad a central nervous system to match its own complexity and potentially fantastic efficiency.

Where do railroaders turn to keep up with all this? To the pages of weekly Railway Age. What a place to tell them all about *your* ideas for progress!

Be part of the weekly excitement in **RAILWAY AGE** *the transportation weekly*

"Guided movement": gateway to the new railway age

What a brilliant idea it was back in the 17th century when crude track was mounted up above the mud to provide support and guidance for wagon wheels!

What a brilliant idea—vastly refined in railways—it still is today!

What a blessing it would be for cars and trucks if their wheels could travel main routes in something like guiding ruts! (Scientists struggle for a practical system of automotive guidance, perhaps with electronic guidelines buried under the pavement.)

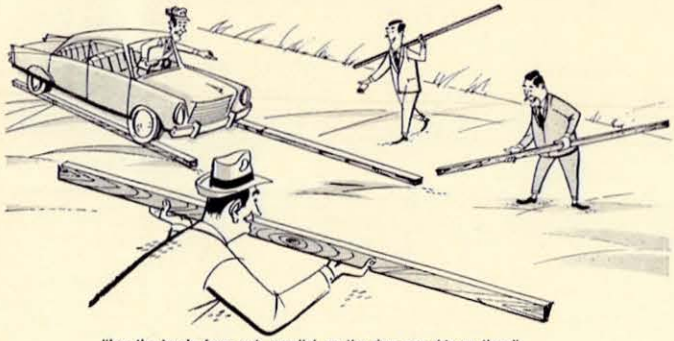
Guided movement, in fact, is the key to the whole automated future this country must achieve to keep its place in the world. Fewer people must perform mechanical-style functions that machines perform better and cheaper. More people must be efficiently applied to providing goods and services now in short supply.

Guided movement—whose principle is expressed so clearly in a railroad's track—is what makes a modern factory possible. Without the guidance of conveyors, transfer machines, the slides on which tool heads travel, the whole complex of motors, tools, sensing devices and programming equipment would be useless.

What's new in the way *railroads* are taking advantage of guided movement—with ever more sophisticated use of signalling, controls, communication, computerization, new operating procedures? Where railroaders turn to find out, week after week, is in weekly RAILWAY AGE. What a place for you to tell *your* part of the story!

Be part of the weekly excitement in **RAILWAY AGE** *the transportation weekly*

"If we didn't have trains, they would have to be invented"



"Lay the two-by-fours out—parallel, so the rims can ride on them"

How Bob Smart Invented the Train – a fable

Kepunkata-poop, kerpunkata-poop-poop-*bang*. "Nuts," said Bob Smart as he coasted off the turnpike, got out and started tieing his handkerchief to the aerial.

A blue Buick pulled off just ahead. Out climbed Harry Hart, a neighbor. He opened the trunk, pulled out a rope. "How about a tow home, Lucky?" said Harry.

That night Bob lay awake to all hours. "What luxury," he thought. "I hardly touched the steering wheel. Harry did the work." The mental gears clattered and clashed.

Next day Bob passed a pair of close-coupled used cars heading south, noted the special bumper hitch. The gears meshed. "Eureka," he cried.

That afternoon, Bob phoned Harry. "I know you'll think I'm out of my mind," he said, "but how about me towing *you* home tonight? Eh? Fine! Confidentially, I think I may be on to something."

"Well, how was it Harry?" said Bob as he removed the hitch that night.

"You can do it every day from now on," said Harry, snapping his brief case shut. "I got my homework done. How about a set of tennis after supper?"

"We'll take turns pulling each other," said Bob. "Think of all the gasoline and bother we'll save. Actually, that bearcat engine of mine could pull *two* cars."

Bob stared at Harry. Harry stared at Bob. "Let's have a drink," Bob said.

"I call it a 'train'," said Bob a few weeks later as he drew up at the Patent Office, pulling three cars behind him. "You know—like a 'train of thought.' Don't know why someone didn't think of it before. Only one driver has to steer and step on the brakes. Half the guys in town want to join the train. We gotta get organized."

At the high school auditorium the following night, Bob rapped for attention. "Ladies and gentlemen," he said, "we haven't scratched the surface of this thing yet. For instance, why should one big powerful car pull two or three other big powerful cars? It's ridiculous. What we're going to pull is some of those lightweight foreign cars. (Applause.) We'll get to town faster and easier and we'll save a lot more money." (Long applause.)

It was just as Bob said. But still he wasn't satisfied. "Why should anyone have to steer?" he thought. The gears were grinding dangerously. Bob went to the medicine chest for aspirin.

"How about deep ruts in the pavement to guide the wheels?"

"They'd fill up with water and freeze," replied Reason.

"*Inverted* ruts—that's the answer!" Bob whooped and rushed to the phone.

"Harry, call all the fellows and tell each one to pick up a two-by-four at the lumber yard and meet me right away at the school ground."

By the time everyone arrived, Bob had the tires off the wheels of his car.

"O.K., fellows, start right in front of the wheels and lay the two-by-fours out—parallel, so the rims can ride on 'em."

"Look, no hands," cried Bob as he rode along the two-by-fours, arms out the front window.

A cheer went up. "We'll run two-by-fours all the way into the city—and then no one will have to steer. We'll call it a 'rail-road.' "

Time passed and Bob's idea swept the nation. And the mental gears kept slipping into place. Steel rails replaced wood, engines and steering wheels were left out of the towed cars, all the brakes were hooked up into one system, an impact coupling replaced the bumper hitch.

Bob was honored by a big dinner in Washington. Mayor after mayor praised Bob to the skies for saving his city. "Our parks were turning into parking lots, our biggest buildings were garages, and our traffic was fast becoming motionless," was what they all said.

"I just can't see why nobody thought of the train and the rail-road before," was Bob's modest reply. "Its so *logical*. You don't need all those drivers, you don't need all those engines. You take up so little room—a rail-road is so narrow. And nothing, but nothing, moves along so easy as a steel wheel rolling on a steel rail. Think of all the savings!

"And we haven't seen the half of it yet. We can build special cars to haul coal, lumber, steel, fruit, vegetables—and even new automobiles out of Detroit. Why, I predict that the freight train will become even more important than the passenger train."

There was a buzzing at the tables. "A freight train?" Eyebrows lifted, shoulders shrugged.

"Have I gone too far?" wondered Bob.

Then he remembered what Winston Churchill said when asked how he ended a speech.

"When it's time and I come to a group of words containing both a subject and a predicate, I sit down," replied Churchill.

Bob sat down.

Recovering, his listeners rose to give him a standing ovation. They were five hundred minds with but a single thought: "Why didn't someone think of a train and a rail-road before?"

Moral: If the train had come along *after* the car, truck and plane, it would have been hailed as a great step ahead. —George Dusenbury

• • •

This fable has been reprinted all over the U.S.—and as far away as France (where it was re-illustrated to show *French* cars, of course).

It first appeared in weekly RAILWAY AGE, where almost everything new in railroading first appears—new industry promotion ideas, new management ideas, new maintenance ideas, new equipment ideas . . .

What a place to talk about *your* new ideas!

Be part of the weekly excitement in
RAILWAY AGE
the transportation weekly

TRUCK

A typical truck engine has a bore of 4.875 in. Thus there is a circumference of frictional contact between piston and cylinder wall of 15.3153 in. This circumference encloses 18.665 sq. in. of combustion area—for what you might call a "friction vs. power" ratio of about 5 to 6. That is, in an engine this size, it takes nearly an

4.875"

inch of contact between piston and cylinder wall to produce a square inch of combustion area.

The oil companies have done such a wonderful job of fighting metal-to-metal friction that it's easy to forget that there is a tremendous amount of *fluid* friction between the sliding pistons and cylinder walls of a reciprocating engine.

LOCOMOTIVE

A typical locomotive engine has a bore of 9 in. There is a circumference of frictional contact between piston and cylinder wall of 28.2743 in. The circle encloses 63.617 sq. in. of combustion area for a "friction vs. power" ratio of about 4 to 9. That is, in an engine of this size, it takes less than one half inch of contact between piston and cylinder wall to produce a square inch of combustion area—*with only about half as much opportunity for fuel-consuming friction as in the truck engine.* This friction is a sizable factor. One automotive manufacturer has estimated that at 30 mph, more power is expended to overcome friction within the engine than is delivered to the rear wheels. In fact, now that engine parts are fitted so tightly, friction has become such a factor that they don't give you a crank with even a small car any more.

(It's not "compression" you brake with when you shift to a lower gear on a downgrade. It's *friction.* Actually, the compressing in one cylinder is balanced by the simultaneous decompressing in another.)

9"

One of the laws of geometry is a controlling factor in modern mass transportation. The law, worked out in some detail at the left, is this: the bigger the cylinder, the less wall surface it takes to enclose a given volume. Thus it is that for each cubic inch of engine displacement, there is only about half as much opportunity for piston-cylinder wall friction in a giant railway locomotive as in a highway truck.

But the reason why a gallon of fuel gets a lot more done on a railroad than on the highway goes even further than this. Not only does each unit of the expanding fuel meet with less resistance inside the locomotive engine, it meets with less resistance on the railroad track, too. A truck's pneumatic tire is constantly flexing as it rolls along—with tremendous friction and resistance to forward movement. (That's why a tire gets so hot.) On the other hand, the most friction-free movement known to man is of an unflexing steel wheel rolling on a steel rail.

All in all, the train has a tremendous advantage over the truck in operating economy.

Today, the railroads and their suppliers are fast developing other train advantages, too: bigger and more efficient cars, new loading and unloading devices, better signalling and communication, wider computerization.

How do railroaders keep up with all this? Every Monday, they turn to RAILWAY AGE. What a place to offer *your* advantages!

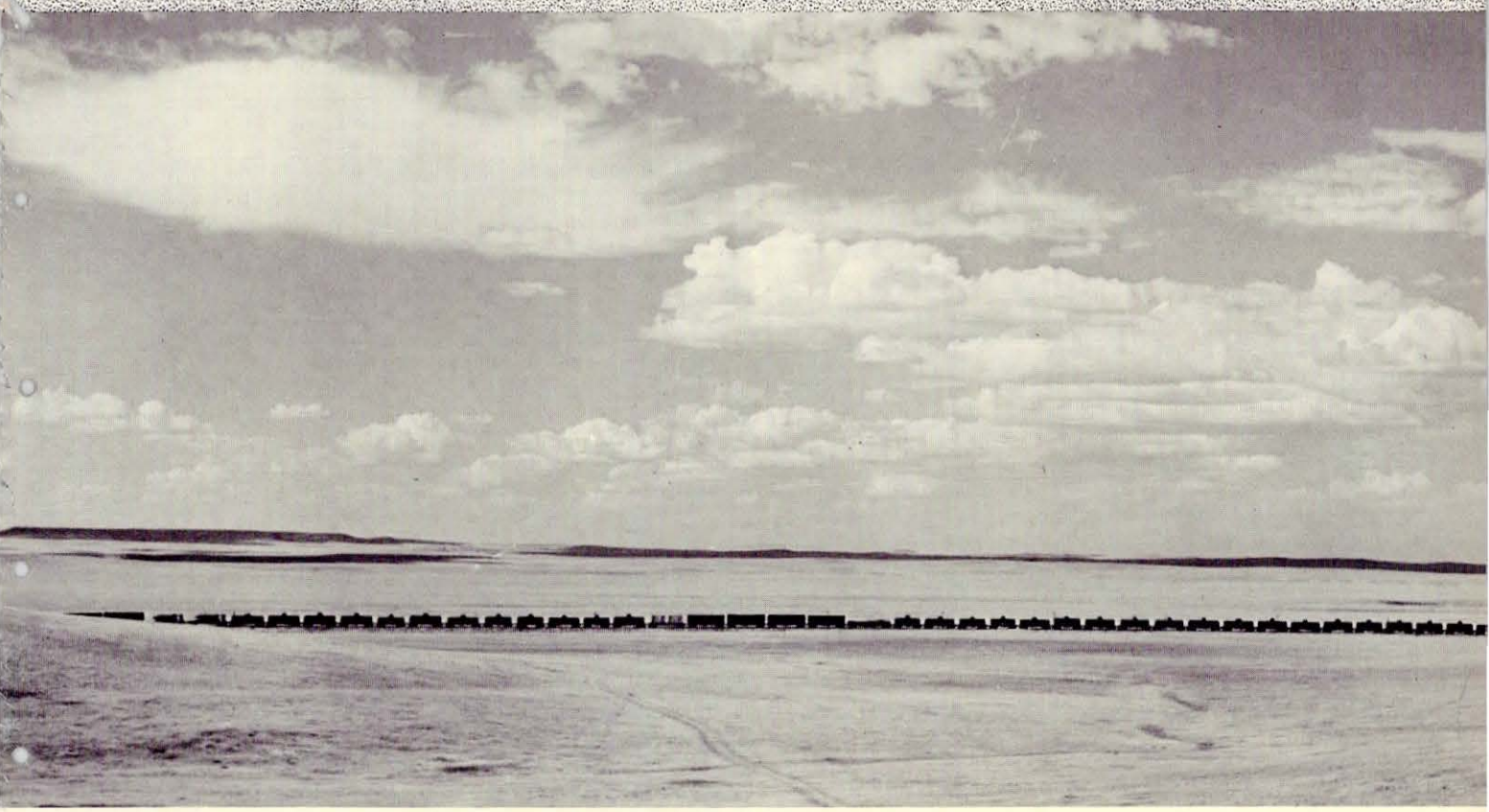
Be part of the weekly excitement in

RAILWAY AGE

the transportation weekly

Why trains carry a given load with so much less fuel

(Part of the hard-rock founda tion of the new railway age)



Ugh! Wagon trains getting heap bigger!

In Indian country—as everywhere—the Iron Horse is bigger than ever, stronger than ever, faster than ever.

And it's still pioneering. It's pulling giant unit trains that shuttle between grain country and port, between mine and mill, between factory and market . . . shiploads that go where no ship can travel.

It's turning around faster, thanks to new loading and unloading devices. (And shippers are getting better service, lower costs!)

It's riding more and more on welded rail—maintained with ever more ingenious track machines.

It's pulling cars that are ever more varied in size, in shape, in cushioning, in function. They carry the red hot, the frozen, the fluid, the powdered, the rigid, the fragile, the too huge and heavy to travel any other way.

Increasingly, the immortal Iron Horse is obedient to a whole new structure of human and superhuman brainpower—with automatic sensing devices, new signaling and communications, new computerization—all bringing new speed, new accuracy, new efficiency.

New, new, new—that's the way it is in today's new railway age. How do railroaders keep up with all this progress? Through the pages of weekly RAILWAY AGE. What a place to tell people what's new with *you!*

Be part of the weekly excitement in **RAILWAY AGE** *the transportation weekly*

What's anything doing out in weather like this?

There isn't much out, that's true. A busy signal is all you get from airport and highway department.

But trains are going through. Makes you think.

Here's a form of transportation that brings tremendous power and carrying capacity to bear on quite a narrow strip of real estate. And easier (narrower) snow removal is only one of the benefits...

How about all the land that's left for people?

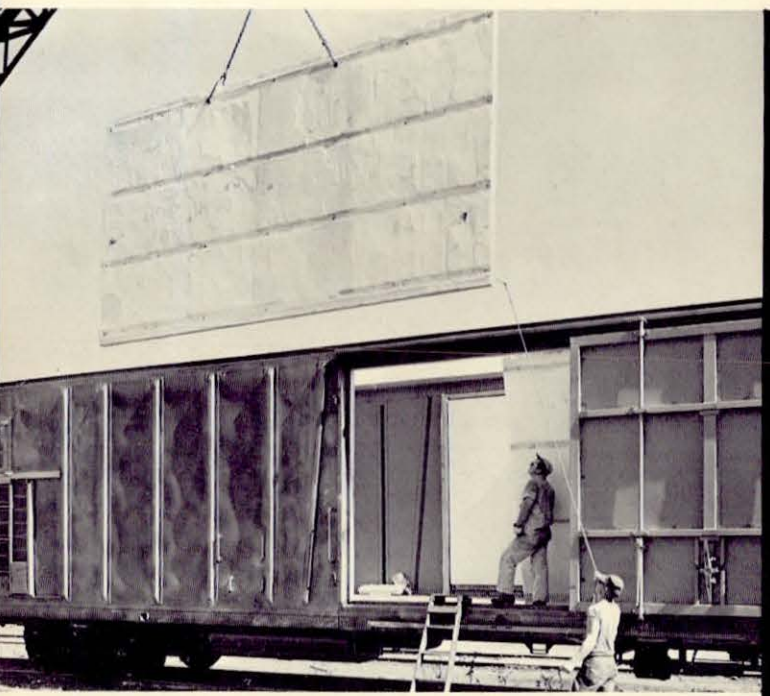
They say that four-fifths of downtown Los Angeles is already pavement. No wonder. To match the load-carrying capacity of one track of a double track railroad would take a highway estimated at ten to twenty lanes wide, if you can imagine such a monster.

Or let's say there's fog. Newark's shut down tight. The Jersey Turnpike is closed to trucks and cars. But freight and passenger trains are running. How come?

Because trains are the basic mass transportation method of the future. Only trains have guided movement—key to the automated future—a built-in feature of the rails they ride on. Trains take less space, their giant engines have greater efficiency, they're easier to move (nothing travels so easily as a steel wheel rolling on a steel rail), they make better use of manpower (only one "driver" is needed up front on a train that may be carrying as many as 2,000 automobiles out of Detroit)!

Today, railroaders are building toward a great future. That's the week to week story of Railway Age. What a place to talk about the way you can help!

Be part of the weekly excitement in **RAILWAY AGE** *the transportation weekly*



"Mobile homes" for the new railway age

Actually, not many mobile homes for people are so well insulated as a railroad's new "mobile homes" for fruit, vegetables, meat.

They're part of a revolution in box car design that's bringing new cradling and cushioning, new fast-in, fast-out load handling to freight.

Everywhere you look you see heralds of a new railway age. In a tug of war, today's new super-locomotive would quickly pull yesterday's giant out of sight.

Yesterday's maintenance of way machine would appear all thumbs compared with the fast-fingered action of today's new tie replacers.

Increasingly, truck trailers are by-passing the highway mess to piggyback along on whizzing flat cars.

Mammoth cars and mammoth "unit" trains are beefing up the unrivalled lugging capacity of the railroads. The rent-a-train idea is in the air.

New equipment, new techniques, new ideas are constantly bubbling up—and where they surface first is in Railway Age, the transportation weekly.

This is where people look for better ways to get things done. What a place to tell *your* story!

Be part of the weekly excitement in **RAILWAY AGE** *the transportation weekly*

...and what a great place to tell it!

Where? In the weekly print-out of progress known as "Railway Age." Here the railroad industry takes stock each week of what's newest in new unit trains, new loading and unloading devices, a whole new spectrum of specialized cars, new signalling, communication, computerization, new management ideas . . .

Every month, extra distribution of the Freight Traffic Issue widens the audience to include the nation's 10,000 biggest shippers, a prime target of such RA ads as you see here in miniature.

Like full-size reprints for bulletin boards? Write RAILWAY AGE, 30 Church St., N.Y., N.Y. 10007. While they last.

"KATY'S MAKING A DEFINITE COMEBACK"

McLendon, transportation director, says: "When their service got bad, it hurt our business tremendously. The rebuilding of this railroad has been a vital factor for us. Katy bankruptcy would have cut our market area to the area we could serve by truck."

Katy service *did* get bad: "In one instance, two of Katy's 100-ton covered hoppers turned over while sitting still on Katy tracks at Chanute, Kan., while on their first loaded movement from our plant at Pryor."

Another long-standing and -suffering customer is the Lone Star Steel Company whose major plant is near Dallas. Lone Star routes its traffic out of Dallas on Kansas City Southern, but Katy takes it into St. Louis, across Missouri from a connection at Eve, Mo. According to Cecil Williamson, traffic manager, Lone Star never abandoned Katy completely when the situation became almost intolerable. But the company found alternate routes for much of its traffic. "Now we're pleased with their operation. They're right along with the very best when it comes to moving their cars. We don't have to worry about the Katy now. They've done wonders, and in my estimation, the Katy's making a definite comeback. It's a good service route now. We have learned that their schedules are dependable," Williamson says.

The traffic manager of a Dallas peanut-butter maker who routes over Katy to Kansas City says: "The service has been tremendous. Now they're extremely cooperative, especially in providing information on shipments. When they say a car's going out on a certain train, it goes out."

● **Sales, not marketing.** For the first time in years, Katy has a genuine product—good service. The railroad's efficient and motivated sales force covers the United States in search of buyers. At the same time, it tries to compensate for the lack of a Katy marketing department. The leader of the force is Frank J. Heiling, vice president-sales and service, and he has designed the sales operation so the customer takes priority.

"We try to make up for our lack of marketing by working harder," Heiling says. "Every salesman must spend the maximum amount of his time in the presence of the customer. We find there's no substitute for knowing the shippers. We figure we're wasting lunch hours if we don't spend them with the shippers. You can cover this country if you want to. We put all our men in the air. We don't waste any time on surface transportation. The major cities are easy to get to. But we make the extra effort needed to get to the cities where the industries are actually located."

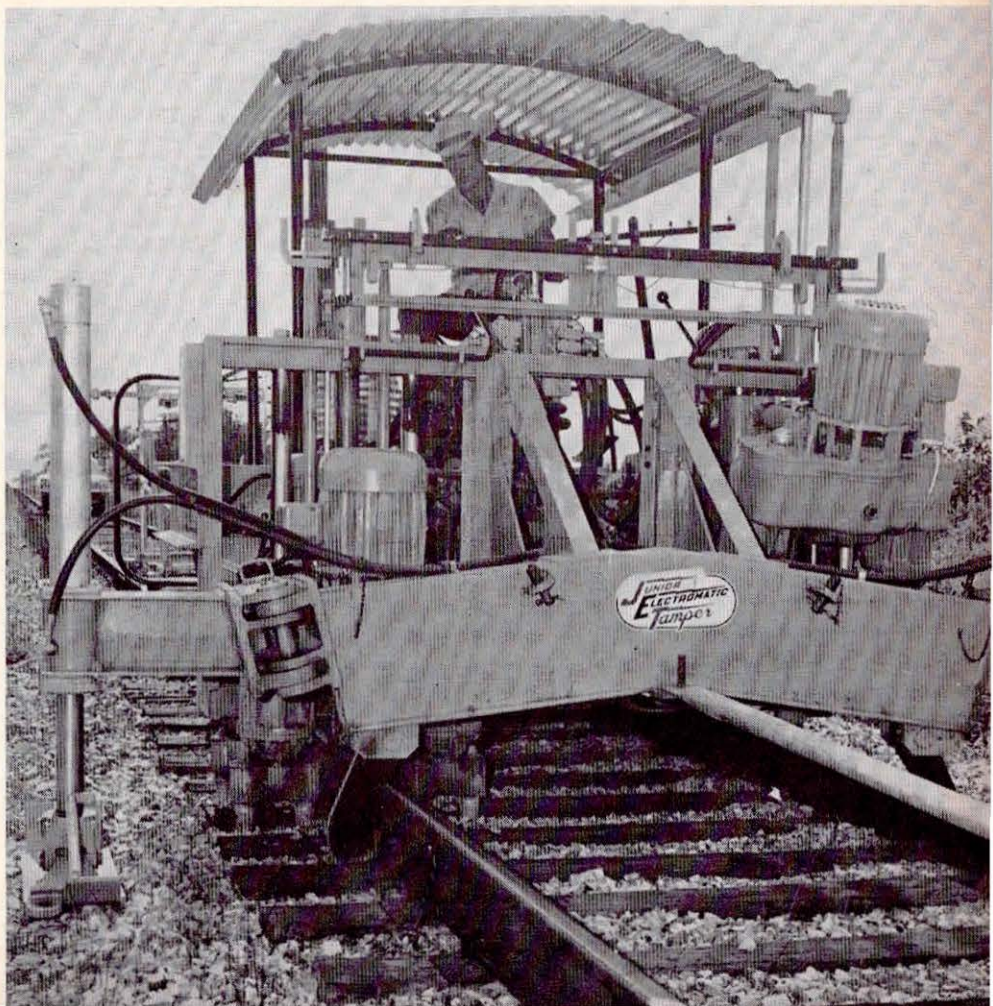
Heiling sets the example. He travels 110,000 miles annually, and spends only 50 working days annually at his Dallas headquarters. Almost daily, in several cities at once, Barriger, Heiling and Katy salesmen can be found lunching with shippers' groups as well as making calls.

Another part of Heiling's plan is an emphasis on revenue per car as the measure of sales effectiveness: "We don't ask a salesman 'how many' cars, but 'how much' money per car. We've got to bring our income-per-unit up. We're interested in cars that produce $500, not $125," Heiling says. He points out that Katy's revenue per car now is about $193, compared with $145 in 1965, and adds: "We'll probably hit $200 per car by the end of 1968." In 1965, Heiling says, Katy had 341,251 carloads for $6 million in revenue, and in 1968 only 325,000 cars are needed for the same amount. "We can reasonably expect to get back to 350,000 cars per year and hold there, for $75 million in revenue," Heiling concludes.

His sales force now numbers 103 men. Of these, 10 were hired in 1968. Each year many of the men are sent

FOR NEW TIES, as of July 30, Katy had spent more than $855,000 in a program to install 400,000 new ties annually.

TAMPING MACHINE puts finish on Katy track work that had received $102,000 worth of new ballast as of the end of last July.



to Northwestern University or Stanford University for courses in traffic and other sales-related subjects. Where do new Katy salesmen come from? Some from college. But Heiling says: "We're looking for the high school graduate who's not going any further and knows he's got to make it against the college graduate. We'll augment his high school education with traffic courses."

Heiling sends his men out to offer customers only what can be delivered: "We can't authorize every salesman to go around making indiscriminate promises. But they can talk about punctual schedules, good equipment and fair rates." Barriger adds: "A railroad's not a taxicab service. You have to make your schedules an intelligent compromise."

One of Heiling's youngest men is Thomas Ogden, 26, sales representative in Dallas. "We go out and talk to the customer, find out what his problem is, and solve it. We aren't tied to schedules as they were in the past, we're tied to the customer's needs as they are now," Ogden says.

Is there customer service in the form of car information? Yes, in a limited degree. A daily car trace is performed manually for 26 customers. At Denison, Tex., 60 miles north of Dallas, a three-man group acts as liaison between sales, operating, and customers. One man controls Katy's 2,950 special cars, and reports directly to Heiling. Another man controls the regular equipment, and reports to the operating department.

● **Morale soars.** The Barriger plan has boosted employee morale as much as customer satisfaction. Insiders and outsiders see rising spirit in the Katy ranks. One insider is General Manager Bishop, who says: "One noticeable thing definitely is the morale of the employees. It's 100% better since Mr. Barriger come on. Our people are working harder and they show more interest in what they're doing. It's evident that we're getting someplace—and our people know we are."

One outsider is Lone Star's Williamson, who says: "My thought about the Katy a number of years ago, before Barriger's time, was that the fellows who called on us were sort of apologetic. A nice bunch of fellows, but they didn't act like they were on a winning team. Now the attitude of the employees has changed from being apologetic to being proud of their property and their service."

Another outsider is Julian McLendon. "Katy salesmen acted like they were embarassed to solicit a carload of freight for fear it would be derailed, lost or bad-ordered for excessive periods of time while on the Katy. Fortunately, this has changed. Katy men no longer have to make excuses, because they have the cars, service and mainline track that will do the job. This new sense of pride is reflected in their attitude when they ask for that 'extra' car to make the Katy a profitable railroad," McLendon says.

Still another witness, Larry Parsons, a member of Katy's accounting firm: "When I came on in 1965, I thought this thing might last till the end of the year. The fact that these people held on to their morale and spirit is incredible. There was no reason to hope; there were no prospects. It was a mess. Preliminary inspections found car shops shut down, roofs falling in, windows broken, weeds growing through parked cars, derelict cars stacked as far as one could see. My reaction as an auditor was, Write it all off."

On the inside again, Don R. Montgomery, Katy assistant vice president-operation and controller, says: "The morale now is excellent. It's indicative of a company that's no longer suppressed. This rise is not based just on expectations. It's not just the result of thinking there is going to be an improvement. The improvements are here already."

In 1965, according to R. H. Williams, Katy's chairman for the Brotherhood of Locomotive Engineers, "Morale was as low as any morale could drop." Previously on the Katy, "contracts meant nothing." Barriger has pushed good management-labor relations and the situation has "improved tremendously. The more Barriger has been able to accomplish, the more the men have been behind him," Williams says.

Salesman Tom Ogden agrees that there's been a great morale boost, and says: "It's a reflection of faith in Mr. Barriger. One sign is cooperation between departments. That's what this railroad has, and because of it we can get things done that many railroads can't do. Cooperation has led to confidence."

● **Still much to do.** Though 1969 looks like the comeback year, that's about all it will be. Barriger is the first one to say there's still an enormous job left in Katy's rehabilitation. What it amounts to is further modernization aimed at facilities. This includes new yards at Denison and Dallas, new communications equipment, automatic block signals and CTC, and new car shops. "Our car-repair facilities came out of Noah's Ark," Barriger says. Katy has little automatic-block signalling and no CTC. "We ought to put in CTC, not so much because we have the train density, but because CTC speeds up movements," Barriger says.

Computerization already has moved in a little. At the Denison offices, an IBM 360 and related controls are being installed. By April 1, 1969, this equipment is expected to provide complete cartracing services, including information that will aid car utilization.

This will be followed by programming for other operating activities, one of which will be terminal performance control.

Computers now in service consist of an ancient IBM 1401 and its backup machinery. The equipment is used mainly for accounting jobs. In addition, the traffic department gets a monthly report arranged according to commodity and showing revenue per car compared with the same date the year before and the same month the year before. For traffic, too, there's a quarterly report on tons per car, revenue per ton and revenue per car. There's also an end-of-the-month purchasing report arranged according to payee and showing the amount of each purchase. The mechanical department gets a report on repaired cars showing repairs made on each car at each station. It also gets a report on diesel mileage as an indication of inspection needs. Finally, there's a report on loss and damage for the freight claim department that shows the amount paid for each claim.

The tracing service available for major shippers is based on a daily broadcast report listing all cars moving in all trains for one day. This comes from train consists rather than punch cards.

● **The original problem.** Talk about Katy's future inevitably returns to the original problem of bad track, and

Cars for the Katy--new and rebuilt

In 1967, the Missouri-Kansas-Texas rebuilt 702 of its freight cars. The road's over-all car program calls for rebuilding half of its fleet and replacing the other half. Since 1965, new cars purchased have totaled 3,800, and 1,900 more are to be delivered through the current year. Total cost of the car program—buying, leasing and overhauling—is more than $80 million.

that brings the conversation to a related subject—merger. For Barriger, the whole question of Katy survival is summed up like this: Spend $30 million more for the new rail required to get Katy back to blue-ribbon status, or merge the Katy with another railroad and thereby cut the amount of money needed for complete track renewal. With only about 70 out of more than 400 miles of too-light rail replaced, the track program has just begun. Under a merger with one of many possible candidates, Barriger estimates that less than 200 miles of track would need replacement. "The great thing on this railroad is that we've got to either find a substitute route to get into St. Louis and Houston, or take out all the 80- and 90-pound rail on those lines and put in 115-pound if we're going to remain competitive. The big problem definitely is track. That will be no problem is we don't have to re-lay more than 200 miles of rail. But it will be an immense problem if we have to relay all of it.

Without a merger, we'll need $30 million worth of new rail. We'll get it as fast as we can, but we'll be lucky to do it in five years. With a merger, it would cost about $12 million. That's a lot less than $30 million, and you'd have a strong railroad rather than a weak one," Barriger says.

● **Merger prospects?** Barriger's ready to merge his railroad with almost anybody, and he's determined to make the Katy an attractive marriage partner: "With anybody, we'd fully carry our load. I've talked to all the railroads at one time or another about merger. Most of them around here thought we were going broke and that they eventually could buy us up at a courthouse sale."

Barriger recently testified before the ICC that Katy should be included in "one of the systems that will emerge in the West" if either Union Pacific or Chicago & North Western gets control of the Rock Island, with sale of the southern half of CRI&P to Southern Pacific or Santa Fe. Barriger can list routing advantages that any of five railroads would gain from merger with Katy.

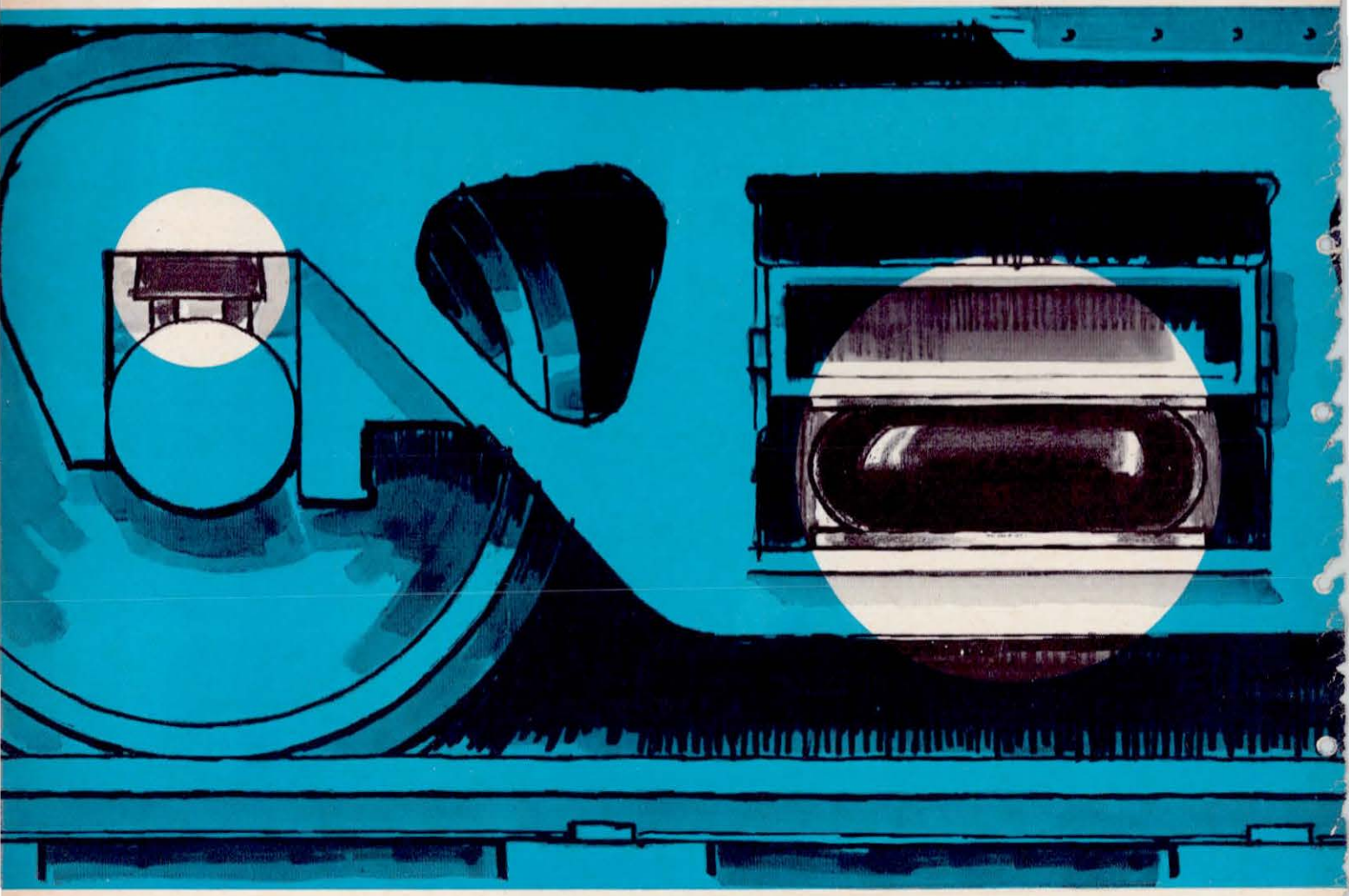
Does he have a partner preference? The answer is yes: "The Burlington could get the best use out of us on an end-to-end merger. It would provide that best route from Chicago to northern Texas." Other Katy officers share this view.

The merger possibility affects much of Barriger's planning—for example, the creation of a marketing department: "Marketing comes after rail, if we remain independent. We could start a marketing department and then merge. And one of the economies of the merged company might be to get rid of our marketing department. Anyone we merge with will probably have a better marketing department than ours."

● **An overtime job.** Whether merger comes soon or not, Barriger is determined to continue spending, upgrading, replacing, selling—and working overtime. Although the Katy this year decided to enforce its rule of retirement at age 65, a few exceptions are being made. One, of course, is John W. Barriger, age 68. Katy employees say his energy has sparked their morale as much as his program has. It's become a custom for Barriger to signal the close of a lengthy dinner with friends, employees, and customers by saying, "Well, I think it's time for all of us to return to our great and noble work."

The thing is—the watch on his vest-front chain probably shows the time of his statement to be 8:30 p.m., or for Barriger, two hours (at least) till quitting time. ■

How do you build tomorrow's



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Smoother ride loaded or light. The rubber main spring – called Lastosphere (Patent Pending) – replaces steel coil springs. Its unique, spherical shape provides a near constant frequency. Any amount of lading rides with the same degree of smoothness.

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Motion without wear. The new roller-bearing adapter mounting permits needed lateral motion without causing wear. Installed between the roller-bearing adapter crown and the side-frame pedestal

truck today?

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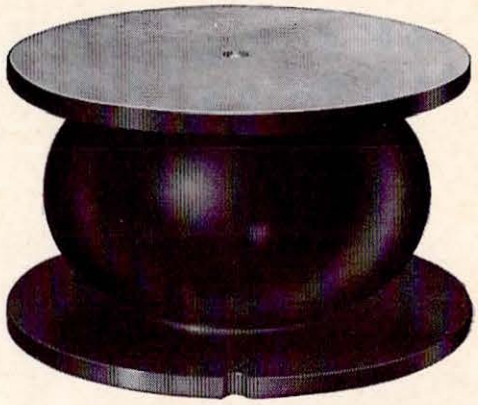
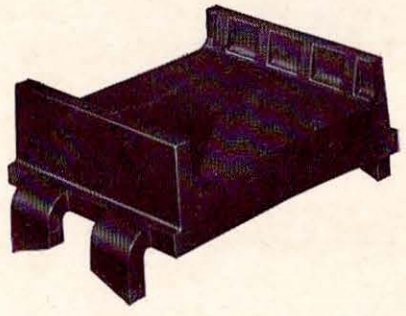


Revolutionary Lastosphere spring gives constant frequency performance, protects lading, improves truck operation.

Elastomeric roller-bearing adapter mounting provides vertical and lateral cushioning, eliminates metal-to-metal contact and wear.



roof, it eliminates metal-to-metal contact. The adapter mounting is designed to improve truck riding characteristics and:

- isolate high frequency shock forces from wheel and rail to car and lading
- reduce impact forces to the bearings
- eliminate wear between adapter crown and side frame pedestal roof

Long, low-maintenance life. The Lastosphere springs and adapter mountings also cut maintenance costs by reducing wear and promoting longer service life of truck components. Both items are constructed to stand up to the grit and grease of railroad environments.

Singly or in combination, these Lord innovations may be installed for test purposes in standard AAR side frames with modifications. Springs and adapter mountings together weigh less than the standard spring groups. AAR authorization has been requested.

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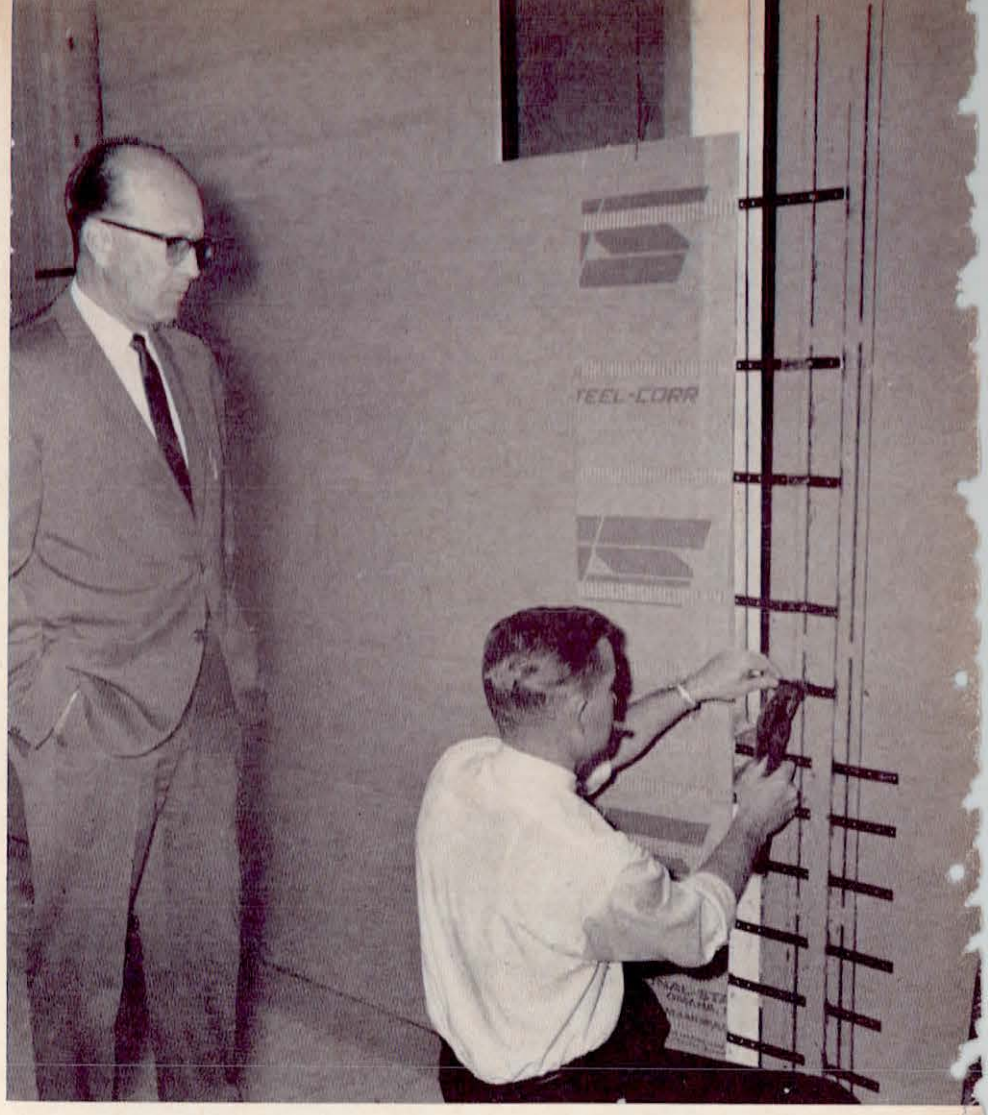


HOW IT'S DONE: Here one type of grain door is secured to the new Postmaster nailable steel door posts. E. R. Craven (left), Burlington's general superintendent-transportation, looks on as application is made by E. T. Walker, district sales manager, International-Stanley.

Nailable door posts for grain cars

Material and installation costs are said to compare favorably with those of wood posts. Posts may last as long as the cars on which they are installed.

The wooden door posts to which grain barriers are secured in 40-ft box cars are constantly battered and chopped at by hammers, crow bars, hatchets or any other handy tool that can drive or remove nails. After repeated nailings (perhaps upwards of 600 nails will be driven into a single post in just one year's time), these posts begin to take on the appearance of a termite colony's favorite target.

"Of all the parts in a box car, you could probably single out door posts as the ones which must absorb the greatest amount of punishment," says E. R. Craven, general superintendent—transportation of the Burlington. "Because of this rough treatment, they become the number one source for shipper rejection of grain-hauling box cars on our road."

● **Nailable steel post.** If tests now being conducted on two Burlington 40-ft box cars equipped with new nailable steel door posts continue to produce favorable results, this perennial problem — at least on the Burlington — may be approaching oblivion. The new steel post, called "Postmaster" by its developer, International-Stanley Corp., has demonstrated an ability thus far to perform reliably and to withstand the uncommonly harsh treatment given door posts when grain doors are being installed or removed.

A granger road with better than 30% of its 43,000-car freighthauling fleet composed of 40-ft box cars, the Burlington sees many advantages for both railroad and shipper in the new posts. "The potential this post offers in reducing out-of-service time alone for grain cars makes it a most worthwhile item," explains R. E. Taylor, Burlington's chief mechanical officer. "Moreover, taking into consideration the increase in service life which can be anticipated, the material and installation costs compare very favorable with those of the wood posts. We think they'll produce a considerable savings in maintenance costs."

● **Next year's program.** Initially 100 carsets (four per car) of the Postmaster have been authorized for installation in Burlington cars scheduled in the road's 1969 heavy repair program. Altogether, 700 40-ft box cars are scheduled to undergo major repairs next year at the road's Havelock, Neb., car shop. If the test cars now out in service continue to produce highly satisfactory service data, "all 700 cars may be equipped with the new steel posts," according to Craven.

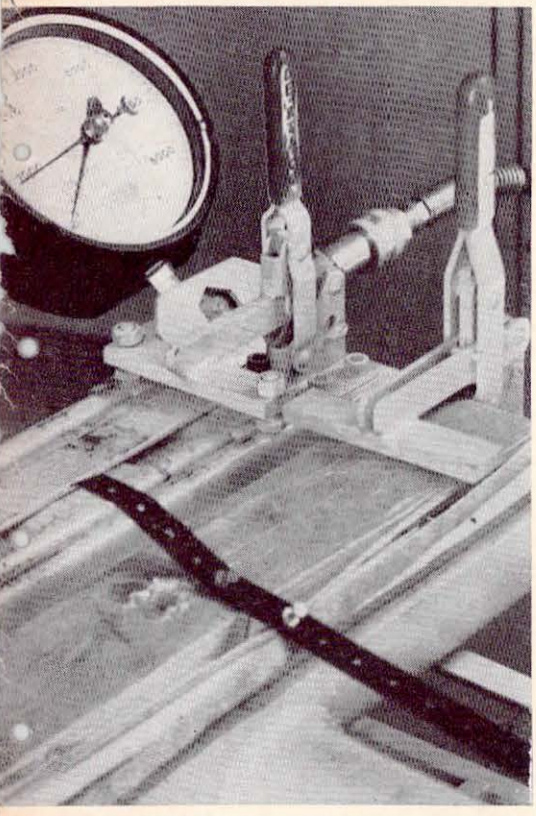
Designed to accept the nailing strap of all grain doors regardless of manufacturer, the Postmaster assembly con-

sists basically of a 3-inch-wide embossed channel flanked by a pair of J-shaped pressings. A 1¼-inch-wide anchoring bar is welded to the face of the main channel creating slots at the embossments through which the grain door strappings are threaded and then looped over for securement.

The slim channels into which the nails are driven are formed by skip welding the "J" pressings to the flanges of the embossed channel. To give added strength to the assembly, the pressings are also welded to backer plates located inside the channel. Like the embossments in the channel, the backer plates, seven altogether, are spaced closer together toward the bottom of the post where greater stress is encountered when the car is under load.

Made of 12-gauge steel, the Postmaster is 8 ft high, 4-⅝ inches wide and 3-⁵⁄₁₆ inches deep at the backer plates. It fits into the same location, adjacent to the door frames, as do the wood posts, and can be installed in new or existing cars, and in cars with or without side linings. Adjustable up to ½-inch, it is welded to the door frame and, through use of simple adaptor brackets, to the skin of the car.

● **Readily installed.** No unusual problems were encountered by the Burlington's car department when installing the posts in the two experimental cars.



IT HOLDS TIGHT: In the test apparatus shown above the steel banding snapped at about 1,300-pound pressure. The one nail remained firmly engaged in the new-type steel door post.

"On the basis of our experience with these cars, we estimate that production line installation costs may be less than those for wood posts," explains A. J. Havlik, superintendent car department.

Total material and installation costs — $85 for a car set of the Postmasters, less than $20 per car for installation. "But, we think that the Postmasters have the potential for lasting the full life of the car and, in the long run, they'll really cost our railroad less money," says Havlik. "Wood posts, on the other hand, may remain in service for about four years—some a little longer—so their replacement costs plus the added out-of-service time are factors which must be considered when making comparisons."

● **Principle differs.** While the nail securement principle of the Postmaster is similar to that of nailable steel flooring, there is a noticeable departure, namely in the shape of small nailing channels running the full height of the post. Unlike the flooring's nailing channels, which crimp the nail as it is being driven, the Postmaster's channels are rectilinear and do not distort the nail.

"We chose this design so as to gain greater support of the full shank of the nail," says W. E. Bruning, International-Stanley's vice president. "In the case of our grain door where the banding is looped under the anchoring bar and then folded back, the nail actually passes through two thicknesses of the banding. In effect, a push-pull force is exerted on the nail when the banding is drawn taut by the load pressure on the grain door, and this action tends to help hold the nail firmly in place."

When installing either Signode or wood grain doors, the anchor bars are not used. If Signode barriers are used, nails are driven through the banding into the post's two nailing channels. For wood doors, the nails are driven through the stock into one nailing channel in each post to provide reliable securement.

"In one test of a sample post, we have driven thousands of nails into one small area of a nailing channel and, while the point was eventually reached where we could drive the nails merely with thumb pressure, this slight enlargement of the channel interfered in no way with the nails' ability to hold the banding securely in place," Bruning adds.

● **Outperforms wood.** The Postmaster repeatedly wins a tug-of-war contest in a special test apparatus used to demonstrate its holding ability when compared with the wood posts. When looped around the anchor bar and then nailed to the sample Postmaster section locked in the apparatus, the .020-gauge steel banding invariably snaps as it is stretched. Meanwhile, the one nail securing the banding to the post shows no indication of becoming disengaged from the nailing channel.

When similar banding is nailed, using three nails, to a section of a wood door post, as the stretching pressure is increased, the nails begin to creep out of the post, then bend, and finally the post starts to crack. When the gauge on the apparatus indicates a force of about 750 pounds is being exerted, the nails are ceasing to hold the banding firmly to the wood post. In the Postmaster test, the banding snaps at close to 1,300 pounds of force.

One of the two Postmaster-equipped Burlington cars has now been in revenue service for several months. Performance data accumulated on it thus far has been highly encouraging, according to Burlington officials. Meanwhile, the other car has been on a nationwide tour to allow operating, transportation and mechanical officials on other railroads, as well as shippers, to see how the new steel post is installed and how it is used to secure grain doors.

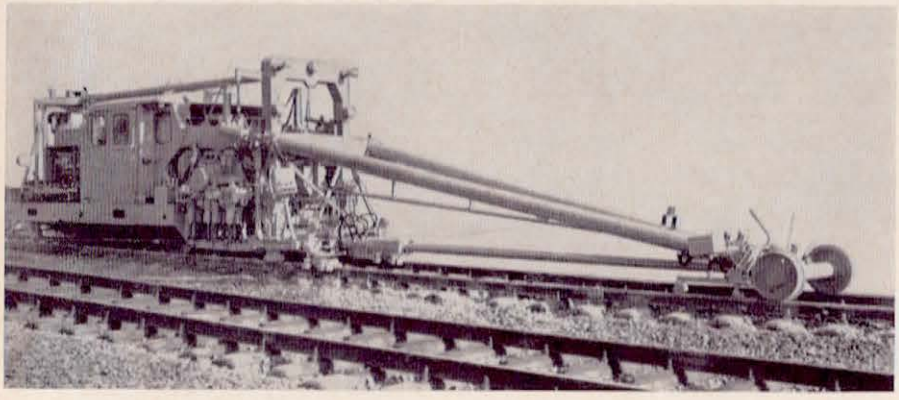
"Although some of the roads which have been introduced to the new post are not what you would call 'granger roads', they still handle a considerable amount of grain in 40-ft box cars," observes Craven. "And, like the Burlington, they experience quite a bit of trouble with door posts."

"An otherwise good, solid car can become unsuitable for grain hauling very quickly once the door posts start to give out, and, as the damage spreads, the costs of restoring the car to acceptable condition will rapidly soar," observes Craven.

● **Still in demand.** While covered hopper cars are used extensively on the Burlington to handle grain and other bulk products, the fleet of 40-ft. box cars still handles a major portion of this traffic. "We can expect about 18 trips a year in grain-hauling service for each 40-ft. box car, plus an additional five or six in the handling of packaged products," explains Mr. Craven. "These cars are workhorses and they spend very little idle time on sidings, so it's essential to our business to keep them off the rip tracks where they cost us money, rather than earn it."

To add to the Postmaster's versatility, International-Stanley has also been conducting experiments to determine its ability to serve as an anchoring member for load restraining banding at doorways when packaged cargoes are being hauled. "We're convinced that the posts will function reliably in this type of service and could be used in cars other than 40-ft. box cars," says Bruning. "Furthermore, since they are relatively inexpensive, they could be used as intermediate posts in many types of box cars where inexpensive steel banding might be used to restrain loads." ■

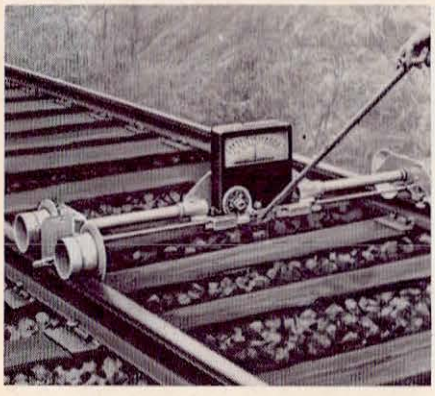
NEW PRODUCTS REPORT



Tamper-liner RA-1

The Matisa Tamper-Leveler-Liners of the "80" Series are now said to be available with "M"-type tamping units with 32 tamping heads, enabling two ties to be tamped at the same time, as well as the track being simultaneously leveled and lined.

The "M" tamping unit for each rail string has 16 tamping tools. The middle tools are double but enter the ballast as a unit, thus, it is said, obtaining the maximum packing stroke. *Matisa Equipment Corp.*



Gage indicator RA-2

Both cross level and track gauge can be checked by one man using a new device called Trakchek. The cross-level indicator, mounted on jewel bearings, is said to be accurate for reading superelevation to within ⅛" at speeds from 1 to 12 mph, and the gage indicator is accurate to within 1/16" for all speeds. Paint spray is used by the operator to mark the locations not in standard tolerance. *American Railroad Curvelining Corp.*

Rail lubricator RA-3

A lubricator that applies a lubricant to wheel flanges and, by contact, to the rails is now available. Designated Kerlube lubricator, this device has a polyethylene sponge that absorbs the oil from a contiguous reservoir. Wheels passing over the sponge pick up the oil and transmit it to the gauge side of the rails. It is available in two sizes: No. 40 holds about 20 lb of oil in its reservoir and No. 120 holds about 50 lb. *Ilsley, Doubleday & Co.*

Hy Rail equipment RA-4

Fairmont has introduced a new lightweight line of Hy-Rail equipment. Designated Series 0306, these attachments are designed for use on passenger vehicles and pickup trucks where the gross vehicle weight does not exceed 6,000 lb. Rubber-tread guide wheels are standard and, using heat-treated aluminum alloys wherever practical, the equipment weight is said to be lowered approximately 200 lb per car or truck. *Fairmont Railway Motors, Inc.*

Snow thrower RA-5

Two Sno-Bee models of the walking type of snow throwers have been made available. The 5-hp Model SB2524 cuts a 24-inch swath and the 7-hp Model SB2728 cuts a 28-inch swath. Both machines are powered by a Tecumseh gasoline engine. A flywheel disc transmission provides four forward speeds from 1 to 2.5 mph, 1 mph in reverse and a neutral position. The units are said to throw both wet and dry snow a distance up to 40 feet. *Allis Chalmers Corp.*

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AS THE EDITOR SEES IT

THE PECULIAR MR. LANG—A year ago, A. Scheffer Lang would have won no popularity contest among old-line railroad men. Even some of the new breed were less than happy with his performance at the Department of Transportation. As Federal Railroad Administrator, Lang was supposed to be the railroads' champion at DOT. But for a champion, he acted most oddly. He made shocking speech after shocking speech in which he called railroad service lousy; said that if the railroads had a bad image, they probably deserved it; and suggested (to public relations men) that "a lot of public relations froth" is no substitute for running good trains on good track on time. Many railroad men began to wonder just what FRA and Lang were up to, and who were they working for, anyway—the highway lobby, maybe?

A SECOND LOOK—There is now some interesting evidence as to what Lang and the FRA have been up to, and their detractors will do well to take a second look. Exhibit I (discussed in this space last week) is the joint study which FRA and the AAR have undertaken toward development of a fully automatic coupler—an enterprise which (if successful) will do more for the railroads than any number of the breast-beating pep rallies in which Lang has declined to participate. Exhibit II (unveiled by Lang just a week ago and described more fully on page 11 of this issue) is a joint Santa Fe-FRA test-track project that is without precedent, as far as we can learn, anywhere in the world. We'd say that FRA is rather demonstrably on the side of the railroads—in action, if not rhetoric.

BACK AT THE OLD STAND?—Even as he announced the test-track project (at a meeting of the National Railway Historical Society), Lang made it clear that he is not ready to stop asking embarrassing questions. He shared the platform with Western Maryland President Arthur Grotz, who spoke penetratingly and brilliantly of what railroads have to do—with government help, or at least, with government non-interference—to become attractive once again to outside capital. Lang liked Grotz' speech, and he said so. But he questioned whether railroads, even if they won absolute rate freedom, had men on their staffs competent to use this freedom. And he wondered if railroads, even if they won the right to own or control other modes of transportation, had men with the skill and imagination to manage coordinated transportation companies. For one thing, Lang suggested, railroads have very few managers with the concept of service that has made trucking so fiercely competitive. All of which probably upset the old-liners no end. —L.S.M.

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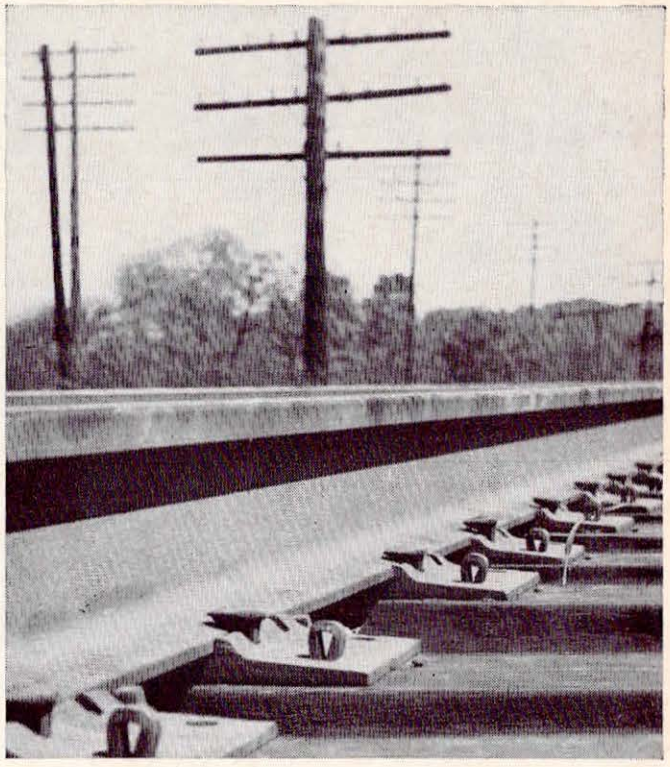

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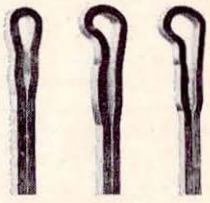

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How do you attract investors to railroads?

By a change of opportunities for the roads, says WM's Grotz

Increasing demands upon transportation by a growing population are going to require railroads to come up with large amounts of money for capital improvements. But with investors growing cooler to railroads all the time, how can this be done?

Western Maryland President W. Arthur Grotz offered some answers last week, calling for a three-step "change in the opportunities" for the nation's railroads to bolster investor confidence in the industry. Grotz spoke at the annual convention of the National Railway Historical Society in Baltimore.

"The first big step must be a change in attitude in governmental regulation and promotion from negative or restrictive to positive and promotional," Grotz declared.

"Many feel that such a change was foreshadowed by creation of the U.S. Department of Transportation. It will occur, however, only if enough voters are aroused to want it as an assurance of the kind and magnitude of transportation service they will desperately need in the future."

● **Just a pussy cat.** He said the change involves recognition of transportation as a highly competitive business and "not a dangerous cat that must be kept behind a steel fence." Monopoly concepts of transportation regulation, reporting, and procedure, which discourage enterprise, have long since ceased being realistic, he added.

"Common sense suggests that transportation companies be encouraged to expand into the business they know, namely, transportation, regardless of mode. How silly to continue regulations which, by denying opportunites for diversification in transportation, leave no alternative to the flow of railroad funds and management interest into clothing manufacture, real estate development, life insurance, and what have you. The compartmentizing of transport by modes must dissolve. Legislation with this objective should be enacted promptly, said Grotz.

● **Second step outlined.** Grotz believes that another major step toward the re-establishment of investor confidence in the railroads involves progressive, farseeing labor policies.

"Necessarily innovative, such policies should be based less on venerable precedents than on the need for a greatly enlarged and strengthened transportation system and the assurance of increased employment and opportunities which such growth would assure," Grotz stated.

"Indeed, it is not absurd to wonder whether a reduction in the number of railroad labor organizations, together with closer communications with management, might not produce mutual benefits. Happily, the first steps toward mutuality of objectives are being taken."

The Western Maryland president believes the final step toward restoring investors' interest in the railroads is financial. "It comprises," he said, "fairness in taxation and in subsidies or other aid."

● **A fair break on taxes.** He admitted that fairness in taxation between public and private transportation as well as between modes, whether or not under common ownership may not be as

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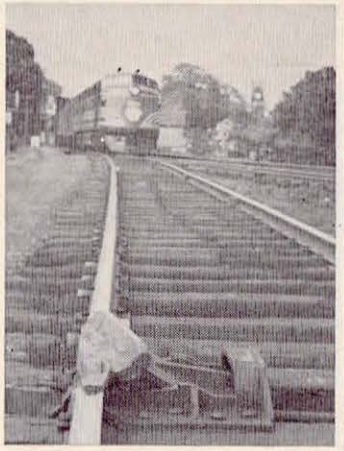

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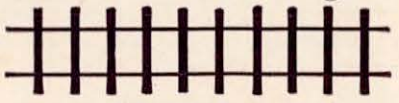

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simple as it sounds. But he said it must be urgently sought.

"Fairness in subsidies and in promotional assistance is likewise a must. To equate with aid to airways, highways, and waterways, aid to railroads is required for research and for right of way improvements required for safety or service standards deemed in the public interest. Naturally, impartial treatment also requires the assessment of adequate user charges for publicly provided transportation facilities. Railroads should pay these as should other modes.

"Where the continuance of unremunerative passenger or branch line services is required by government, subsidy is also appropriate (similar to feeder airline subsidies). Subsidies, wisely applied, will prove far less a burden on the national economy than would be the costs of letting railroads, for lack of voter interest and foresight, limp into public ownership."

Grotz pointed out that it is essential to enlist more young college men for future management assignments, and that the railroads would be assured of a growing, healthy transportation role in America's future if public pressure can be brought to bear to ease "archaic restrictions" imposed by government. ■

Canadian transport men urged to support research

Canadian Pacific Chairman N. R. Crump has called upon the Canadian transportation industry to take a more active role with government in shaping transport research programs and assisting in their development.

Crump, speaking at a transportation day luncheon of the Canadian National Exhibition Association in Toronto, said transportation people should have a deep interest in government research "for it is the industry as a whole which will have to live with and develop from the consequences of these findings."

Crump said there are three levels of research that can be undertaken within the transportation industry: "Where research should be aimed at finding broad answers to national policy questions . . . the organizational questions for all present modes as well as all potential modes of the future . . . and within each individual mode of transport."

He said the National Transportation Act of 1967 rates transportation research very highly, and the entire transport industry "welcomed the new law and the flexibility of pricing and service action it's provided for all modes within the industry." But he added that the industry "has a continuing interest—and a responsibility as well—to be involved in broad research into specific areas. There is an area of interest—an area somewhere between the policy level of governments and the competitive level of companies—where we as an industry must act ourselves to provide the initiative and direction."

CP's Chairman praised the transportation research work being carried on by the Canadian Transportation Research Forum and in universities. However he said he believes "the time has come for the transportation industry to mobilize its managerial talents and systems approach to tackle the problems and capitalize on the opportunities of Canada's new needs in this changing world."

He said the industry can contribute funds and practical experience to research programs undertaken in partnership with government. ■

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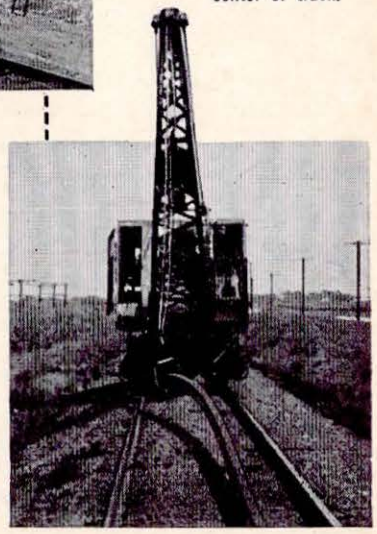
Model 40 Burro Locomotive Crane Ditcher with long digging radius to permit starting ditch ample distance from track. This Model 40 Burro not only digs ditch and loads both near and far ends of cars, but also hauls its own cars with its own power.

Burro Crane, with threader suspended from boom of the crane to guide the rail, shifting new welded rail from the shoulder to the center of track.



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Circle 14 on coupon page 34

PEOPLE IN THE NEWS

Robert W. Richards
Burlington

Martin A. Brieschke
Santa Fe

BALTIMORE & OHIO.—D. E. Riel, assistant terminal trainmaster, New Castle, Pa., promoted to terminal trainmaster, Haselton, Ohio, succeeding **D. E. Childs,** retired. **R. W. Darner,** terminal trainmaster, Akron, Ohio, transferred to Lorain, Ohio, succeeding **J. C. McAlarney,** who replaces Mr. Darner.

H. H. Cowart, trailer service terminal manager, St. Louis, resigned.

BESSEMER & LAKE ERIE—DULUTH, MISSABE & IRON RANGE—ELGIN, JOLIET & EASTERN—LAKE TERMINAL—UNION.—John A. Brown, Jr., appointed engineer–operations research, Pittsburgh, Pa.

BURLINGTON.—Robert W. Richards, assistant general purchasing agent, Chicago, appointed general purchasing agent there, succeeding the late **Steven Pentek** (RA, Aug. 26, p. 59). **W. A. King** replaces Mr. Richards.

CANADIAN NATIONAL.—R. S. Waddington, superintendent equipment, Northern Ontario Area, Capreol, Ont., appointed mechanical officer, motive power, Great Lakes Region, Toronto. **R. A. Robinson,** assistant superintendent equipment, Toronto Area, succeeds Mr. Waddington. **H. M. Whitcombe,** superintendent equipment, Southwestern Ontario Area, appointed mechanical officer, car, Great Lakes Region. Mr. Whitcombe will assist **W. D. Ross,** assistant general superintendent equipment, until Mr. Ross retires, at which time Mr. Whitcombe will assume responsibility for maintenance, servicing and repair of car equipment. Mr. Ross' title will be abolished. **K. J. Moorhead,** industrial engineer, appointed engineering and planning officer, Toronto, succeeding **J. H. Campbell,** engineering officer—equipment, who succeeds Mr. Whitcombe. **C. H. Henningsen,** general supervisor car service, appointed to the new temporary position of co-ordinator—car information project. **F. P. Quinn,** assistant general supervisor car service, will continue to act on day-to-day car service matters during Mr. Henningsen's absence on special duties. **B. E. Newell,** coordinator financial planning and analysis, appointed chief accountant, succeeding **D. F. Wells,** promoted. **E. C. Kirk,** manager of real estate, Prairie Region, Winnipeg, transferred to the Great Lakes Region, succeeding **E. Edwards,** retired.

System jurisdiction, Montreal: **R. J. Hansen,** deputy chief engineer, has assumed responsibilities of head of the engineering function during assignment of **A. V. Johnston,** chief engineer, to special duties. **W. R. Fahey,** structural engineer (design) appointed bridges and structures maintenance engineer. **C. A. Thibodeau,** structural engineer, named structural design engineer. **G. W. Vogen,** assistant to engineer of signals, appointed project coordinator. **C. E. Kirby,** assistant chief budget clerk, appointed project assistant.

CANADIAN PACIFIC.—J. K. Leslie, transportation engineer, Montreal, appointed assistant chief of transportation there, succeeding **E. E. Marlin,** who retired Aug. 31, after over 46 years of service.

W. T. Carstens, assistant manager—freight rates, Pacific region, Vancouver, B. C., promoted to manager—freight rates there, succeeding **C. Baron,** who retired Aug. 31, after approximately 50 years of service. **D. W. Legge** named assistant manager—freight rates—rates and divisions, Pacific Region.

CHESAPEAKE & OHIO.—Louis L. Worthington, freight service representative, pro-

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Job title_____ RA-9/9

moted to district sales manager, Los Angeles.

CHESAPEAKE & OHIO—BALTIMORE & OHIO.—J. C. Bane appointed district manager passenger sales, New York, succeeding **F. E. Knotts,** retired. **C. H. Pergrem** named manager passenger services, Baltimore, succeeding **J. A. Black.**

R. L. Barr appointed assistant manager equipment control, trailer service, Baltimore.

CHICAGO & NORTH WESTERN.—John F. Shanklin named general bridge inspector-system.

CLINCHFIELD.—B. C. Bundy, assistant track supervisor, Marion, N.C., named assistant engineer, Erwin, Tenn.

ERIE LACKAWANNA.—John W. Gallagher appointed division sales manager, Rochester, N.Y., succeeding **Louis C. Williams,** who retired Aug. 31, after nearly 30 years of service. **John E. Snell** appointed district sales manager, St. Louis, Mo., succeeding **John W. Cloud,** who retired Aug. 31, after nearly 47 years of service.

GRAND TRUNK WESTERN.—Robert W. Knapp named superintendent, Chicago division, Battle Creek, Mich. He was formerly acting superintendent there.

John M. Vogeli named general agent, transportation department, Detroit, succeeding **Charles B. Miriani,** retired.

LOUISVILLE & NASHVILLE.—James E. Nall, manager, freight revenue accounting and auditing, named to the newly created position of assistant to comptroller. **Elwood E. Hutchens,** manager, passenger revenue accounting and auditing, appointed manager, freight and passenger revenue accounting.

MILITARY TRAFFIC MANAGEMENT & TERMINAL SERVICE.—Col. William E. Burton, USA, named director of passenger traffic, Baileys Crossroads, Va. Col. Burton had been chief, Logistic Support Services, Southern Command, Canal Zone.

MILWAUKEE.—Warren H. Ploeger, general attorney, Seattle, appointed western counsel there, to succeed **B. E. Lutterman,** elected vice president and western counsel (RA, Aug. 19, p. 37). **James E. Nelson,** assistant general attorney, Seattle, succeeds Mr. Ploeger.

Rodger K. Johnson, assistant general solicitor, and **Anthony W. Summers,** attorney, appointed general attorneys, with headquarters remaining at Chicago.

MISSOURI PACIFIC-CHICAGO & EASTERN ILLINOIS-MISSOURI-ILLINOIS. — R. J. Kremer appointed district superintendent stations and claim prevention, and **V. L. Schwartz,** supervisor stations and claim prevention, both with headquarters at Chicago Heights, Ill.

NEW HAVEN.—Arthur E. Keenan, master mechanic, promoted to superintendent of car maintenance, New Haven, succeeding **Joseph M. Quinn,** retired after 50 years of service. **William J. Mahon,** assistant master mechanic promoted to master mechanic, and is succeeded by **Russell L. Cronk,** general foreman, New Haven shops.

NORTHERN PACIFIC.—John J. Majeres appointed assistant western counsel, Seattle. Mr. Majeres was formerly an assistant city attorney at Tacoma, Wash.

ROCK ISLAND.—J. H. Gilfillan named superintendent safety-operating rules; **J. J. Button,** assistant to general manager-power bureau; **W. M. Irelan,** assistant to general manager; **A. H. Bender,** supervisor operating rules; **K. E. Elyea,** power supervisor. All will have headquarters in Kansas City, Kans.

SANTA FE.—Martin A. Brieschke, assistant to general mail and express traffic manager, Chicago, appointed general mail and express traffic manager there, to succeed **Harold K. Sinclair,** retired. **Bernard L. Checkal,** mail and express traffic manager, Los Angeles, succeeds Mr. Brieschke, and in turn is replaced by **George A. Deaver.**

SOO LINE.—L. G. Sultze named manager, industrial development, Minneapolis.

OBITUARY

Paul W. Kiefer, 80, who retired in 1953 as chief engineer—equipment, **New York Central System,** died Sept. 2 at his home in New York.

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LETTERS FROM READERS

Two-way street?

Youngstown, Ohio

To the Editor:

Your article in the June 10 issue regarding changes in the Illinois Central's Purchasing Department was very interesting. As a large buyer of rail transportation, I was wondering how a railroad would respond if we set the same standards for service as those expected by the IC Purchasing Department from their suppliers. For example, "Here, the supplier simply would put a quantity of his material on the property so stock would be there when needed—and the railroad would pay for just the amount used."

Under this program, the railroad would place cars outside our plant, at no cost to us, and we could draw on them as we desired rather than have to order cars and wait for them.

Obviously, the setting and policing of high quality standards will also be an objective of the Purchasing Department. If a tolerance of plus or minus 2% is allowed the vendors by the Purchasing Department and the same standards set for the railroad on time performance to justify a repeat order, how much business would the railroad gain—or lose?

I am heartily in accord with the objectives and statements made by the IC's Purchasing Department. My point is that company policy should be consistent and a "double standard" should not be permitted. Application of these high purchasing standards to the same company's everyday rail service might show up some glaring deficiencies.

Donald S. Day
Vice President
Youngstown Sheet and Tube Co.

Not the first

Philadelphia, Pa.

To the Editor:

Robert Bartley's excellent article on the Illinois Central bi-level cars in your August 5 issue does, however, contain one error in his statement that these cars will be the world's first electric-powered double deckers.

In Australia, the New South Wales Government Railways has ordered 4 double deck prototype suburban motor cars from Tullochs, to test various features before deciding on a design of motor car to be used with the 120 double deck suburban trailers, recently completed by Tullochs.

In addition, the same Railway has given an order to our licensee, Commonwealth Engineering, for 16 stainless steel electric double deck interurban cars, of which 8 will be motor cars, 4 intermediate trailers, and 4 driving trailers.

S. M. Garrigues
International Manager-Railway
The Budd Company

Computers plus. . .

Cleveland, Ohio

To the Editor:

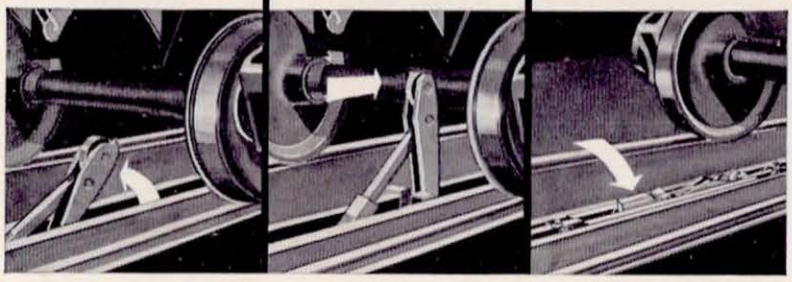
In reply to "A Traffic Manager" (RA, Aug. 26, p. 70) let it be said that the Frisco "has a better idea."

Computers in the hands of good old fashioned people result in a pleasant customer-carrier relationship, which, when coupled with good service, makes happy traffic managers.

The good people are not gone, sir, they're all working for the Frisco.

William A. Scanlon
Frisco Railway

Pops Up **Moves Cars** **Lays Low**



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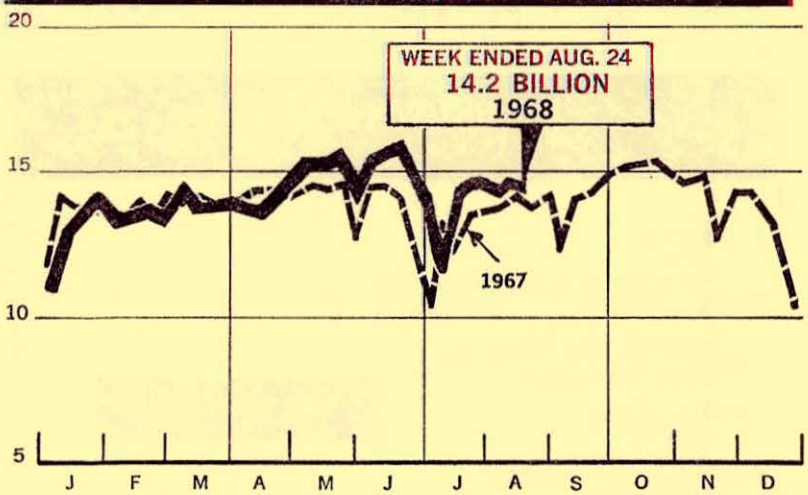
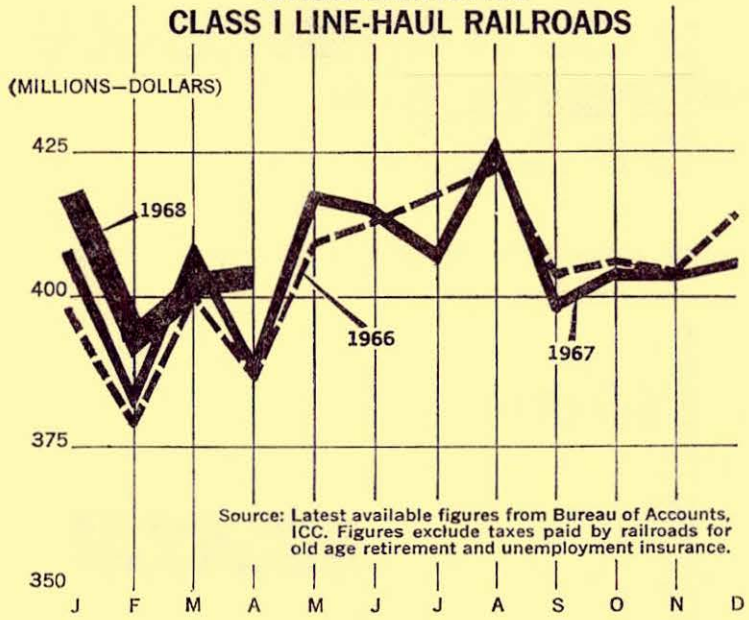
RAIL FREIGHT TRAFFIC TRENDS

BILLION TON-MILES (Estimated)



Source: Association of American Railroads

WAGE STATISTICS
CLASS I LINE-HAUL RAILROADS



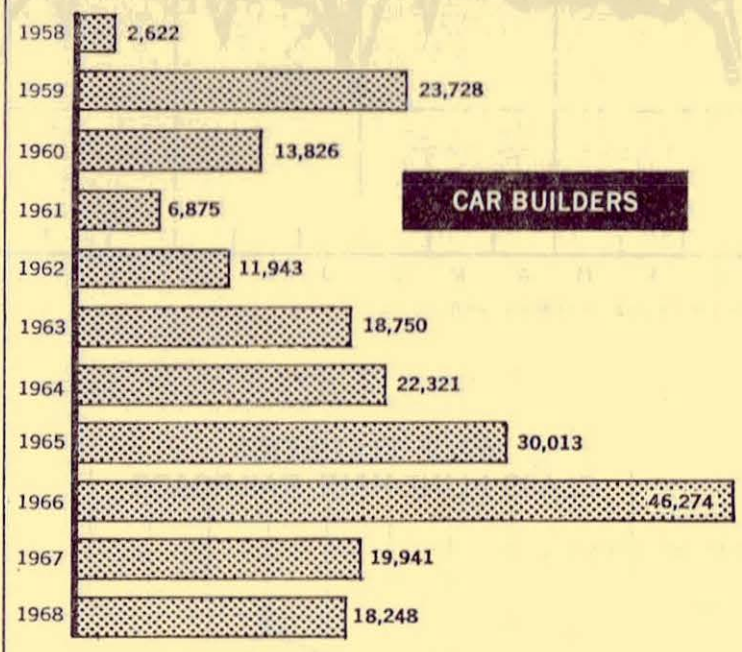
Source: Latest available figures from Bureau of Accounts, ICC. Figures exclude taxes paid by railroads for old age retirement and unemployment insurance.

Current Statistics

Net income, Class I roads	
Six months, 1968	$284,000,000
Six months, 1967	$265,000,000
New freight cars on order	
August 1, 1968	16,943
August 1, 1967	26,904
New freight cars delivered	
7 months, 1968	34,854
7 months, 1967	53,273
Serviceable cars	
August 1, 1967	1,393,000
August 1, 1967	1,415,035

FREIGHT CAR ORDERS

FIRST SIX MONTHS 1958-1968



MARKET OUTLOOK

CARLOADINGS

Loadings of revenue freight in the week ended August 31 were not available as this issue went to press.

PIGGYBACK CARLOADINGS

U. S. piggyback loadings for the week ended Aug. 24 totaled 26,621 cars, carrying 44,013 trailers, compared with 25,002 cars, carrying 40,293 trailers, in the corresponding 1967 week. Loadings for 1968 up to Aug. 24 totaled 858,055 cars, carrying 1,393,204 trailers, compared with 766,626 cars, carrying 1,258,921 trailers, in the corresponding period of 1967.

Reading opens new wheel shop

A $1.4 million wheel shop, named in honor of Reading President Charles E. Bertrand, was officially dedicated by the railroad last week.

The new shop, at Reading, Pa., replaces the facilities formerly housed in the passenger car paint shop, which had been located there since 1931. That building will be demolished and the site used for piggyback operations.

Reading's new wheel shop provides 45,000 square feet of floor space compared with 37,700 square feet in the old building. Production is expected to be increased by 25%.

Facilities include a control panel which operates the 600-ton demounting press, the axle storage conveyor system, and the overhead wheel scrapping conveyor system. The office is suspended nine feet above the floor to permit an over-all view of the shop operation, and to increase the size of the floor storage area.

The shop is completely automated, except for measuring axles and wheel stations. It was conceived by F. G. Fisher, assistant vice president, operations and maintenance, and was built by Reading personnel under the direction of C. C. Quell, chief engineer of equipment and facilities.

FREIGHT TRAIN CARS

• *Missouri Pacific.*—Mexico's National Railroad Car Construction Co. (Sahagun) is completing delivery of 150 70-ton box cars purchased by the Missouri Pacific.

• *Southern Pacific.*—Is rebuilding 1,000 box cars at its Sacramento shops. Six-ft doors are being replaced with 10-ft doors. The cars are also being given new reinforced steel ends, rebuilt trucks, new or rebuilt draft gears and couplers, new decking, new roof sheets as needed, and new plywood lining.

PASSENGER TRAIN CARS

• *Long Island.*—Has placed in service 10 60-seat air-conditioned coaches that the Metropolitan Transportation Authority purchased for the railroad from the Kansas City Southern. The cars, which are between three and six years old, are part of a group of 15 cars the LIRR is acquiring from KCS, at a cost of $210,000. They will be used to improve service on the non-electrified branches of the railroad.

• *Montreal Expo.*—Bids are soon to be opened on the 48 air-conditioned aluminum cars Hawker-Siddeley Canada built for Expo '67. The City of Edmonton prepared a bid, with a view to using the cars on CN suburban tracks.

NEW FACILITIES

• *Canadian National.*—Has signed an agreement with Manchester Liners, Ltd., of Manchester, Eng., to provide a container land-link for the ship line's new container port at Montreal. CN will transport the containers between Montreal and its Toronto express terminal, and will establish a distribution system for the traffic to consignees in Toronto and southwestern Ontario. The railroad will also be in a position to handle containers to Detroit and Chicago, and will provide a return service from export traffic from these points to Montreal. Manchester Liners has ordered three container ships and expects to begin operations out of Montreal late this year.

• *Chesapeake & Ohio/Baltimore & Ohio.*—Ordered a SEARCH locomotive test system for installation at the main shop in Cumberland, Md., from Dalmo Victor, a division of Textron. The unit is a tape-controlled automatic tester that can be used as both a quality control standard and a troubleshooting tool.

• *Santa Fe.*—Ordered an MC-300 single sideband multiplex microwave system from Motorola Communications & Electronics, Inc., at a cost of $258,000. The system, which has a 300-channel capability, will be part of a 685-mile microwave extension from Riverdale, Kan., to Silsbee, Tex. With the extension, Santa Fe will have 3,200 miles of microwave facilities.

YOU OUGHT TO KNOW

The Belt strike: End of the line for BRC service

Working as best it can with supervisory crews, the Belt Railway of Chicago has been making delivery of cars received on line before the Brotherhood of Railroad Trainmen struck the property. Now, however, the delivery job is done. Customer-isolation from Belt service is complete. Belt President and General Manager L. A. Evans reported this with "mixed emotions. I get satisfaction when I realize that through the efforts of our supervisory crews and your cooperation in being ready for our crews when they showed up, the job was done in a reasonably acceptable time. But I am not happy when I realize that this report also indicates the end of any Belt service to you until our employees return to work." The BRT strike began July 29. Thus far, the National Mediation Board has refused to certify it to the President as an emergency deserving the creation of a fact-finding board. As Evans puts it to Belt customers: "I can only urge you to continue to make your plight known to government officials, including the President, who have within their power the provision of Section 10 of the Railway Labor Act to restore to you the essential transportation service of which you are being deprived."

BART sets tax rates for 1968-69

The San Francisco Bay Area Rapid transit District has set the following tax rates to cover a fiscal 1968-69 budget of $29.7 million: Alameda County, 53.7 cents per $100 of assessed property value; Contra Costa County, 47.2 cents; San Francisco County, 49.8 cents. Berkeley property owners will pay an extra 46.2 cents because of a locally-approved bond issue for additional subway construction.

Canada as a land-bridge: Pros and cons

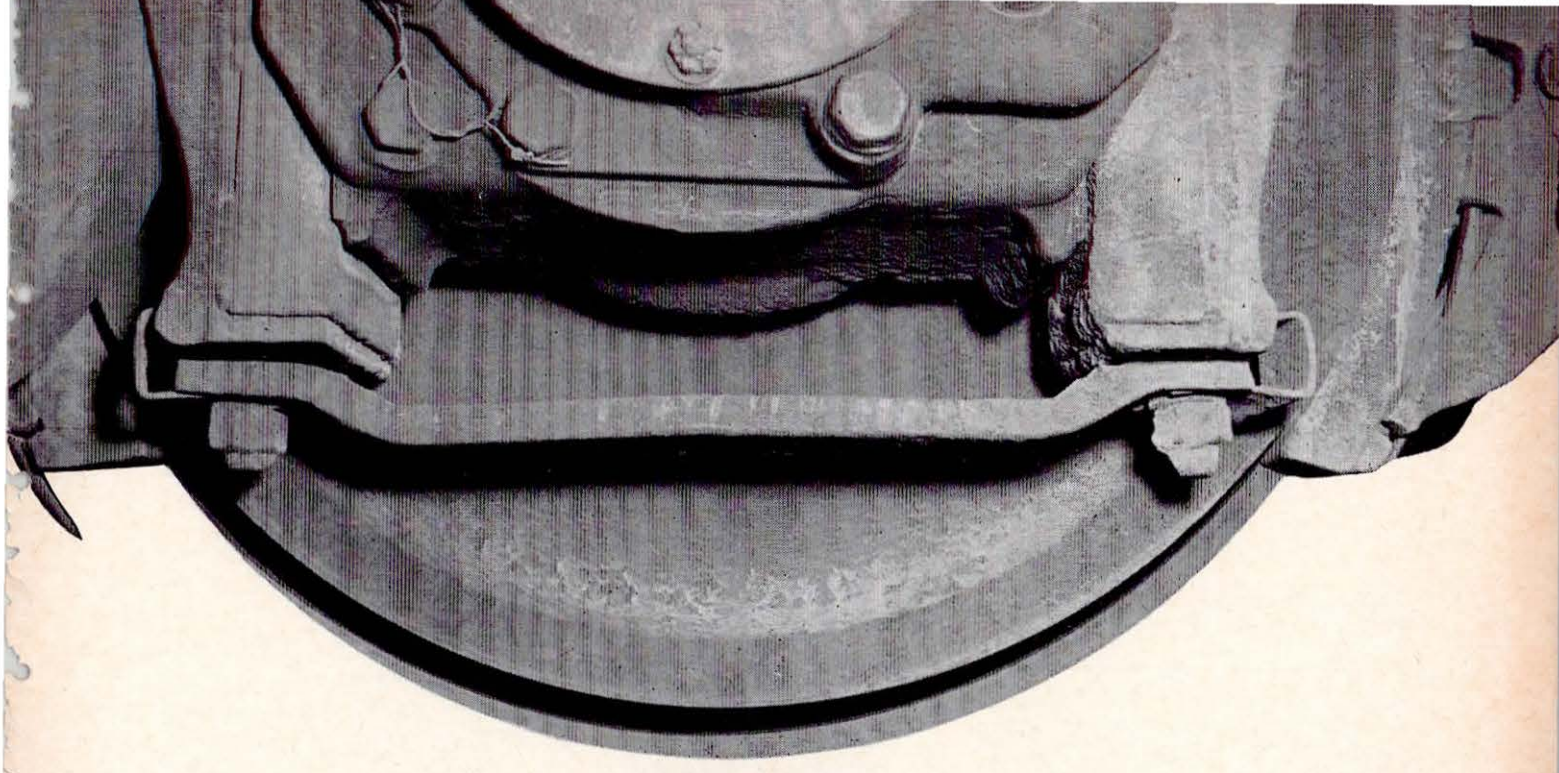
The future of Canada as a land-bridge, linking the markets of Europe and the Far East, was explored by J. A. McDonald, Canadian National's vice president of production, in an address before the Atlantic Professional Engineer Conference in St. Andrews, N. B. "With the close integration between ship and unit train schedules," noted McDonald, "it would be possible to save perhaps two days using the land-bridge compared to an uninterrupted ocean voyage through the Panama Canal." But against this, he said, must be weighed "the cost of effecting a ship-to-rail transfer of containers at each end of the land-bridge and the somewhat higher cost of land compared to sea transportation on a mile-for-mile basis." His conclusion: "I am optimistic. . . . I base my optimism on the increasing efficiency of intermodal transfers and rail transport together with the rising expectations of the transportation market."

Transport Minister of Britain visits U.S. and Canada

British Transport Minister Richard Marsh last week embarked on a busy 12-day visit to the United States and Canada. After conferring with Secretary of Transportation Alan Boyd on Sept. 2, he was scheduled to go to Kansas City to address the Transport Research Forum on Sept. 4. Also on his itinerary: A visit to the Southern Railway in Atlanta, a three-day stay in New York City for discussions with Port of New York Authority officials, and another three days in Montreal.

Frisco calls remaining preferred shares

Frisco will call all of its remaining outstanding preferred stock for redemption on Oct. 11. An Aug. 2 call for 50% of the preferred resulted in conversion of more than 80% of the called shares. Frisco currently has outstanding 49,321 shares of Series A preferred which, if not converted, will be redeemed in October. Each share of preferred is convertible into two shares of common, but conversion rights will terminate Sept. 26. The redemption price will be $100, plus $3.90 in dividends accrued to the redemption date and not previously paid.



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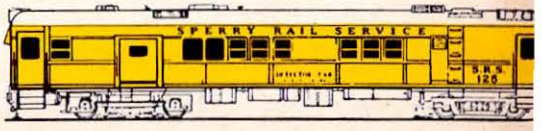
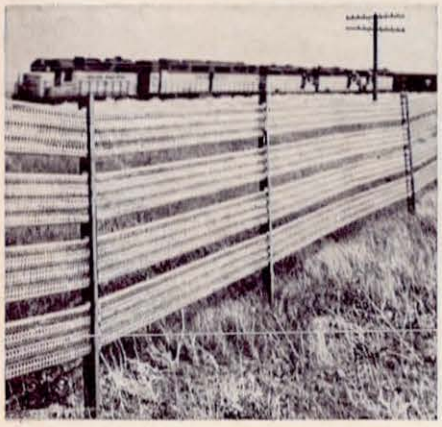


Circle 19 on coupon page 34

Fence Stops Snow Cold



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WALTER TAFT

WATCHING WASHINGTON

CONGRESS IS BACK—Congress returned to Washington last week, getting its post-convention and pre-election session under way. Quite naturally, politics is to the fore, and the members are anxious to adjourn and go home to their top-priority work of getting reelected. When the adjournment will come, however, is anybody's guess. That uncertainty has been pointed up in emphatic fashion by a real expert—President Johnson. About two years ago, at a news conference, the President was asked how long a session then getting under way would last. He replied: "I came here 35 years ago, and the first thing I learned was never to predict when they would adjourn—during the day, or during the week, or during the year."

BIG-TRUCK BILL STALLED—Anticipating the outcome of pending legislation is similarly hazardous. That has been well learned by proponents of the big-truck bill, S. 2658. There's talk now that trucking-industry lobbying for the bill may become a soft-sell, based on individual-trucker contacts with Congressmen. When Congress headed into its recess for the conventions this bill looked like a sure in. It had passed the Senate and was on the House calendar with all required committee clearances—a report recommending its passage from the Public Works Committee and a Rules Committee report promising its scheduling for a vote (RA, July 22, p. 23).

THE STOPPERS—Then came newspaper stores about the trucking industry's lobbying and trucker contributions to campaign funds of congressmen. Also, the American Automobile Association stepped up its opposition campaign, as did the AAR and unions representing railroad employees. So the bill's chance for passage is fading, despite the support it has from the Department of Transportation. While DOT would like to have included increased-user-charge provisions, it did not oppose the bill as now shaped up without them.

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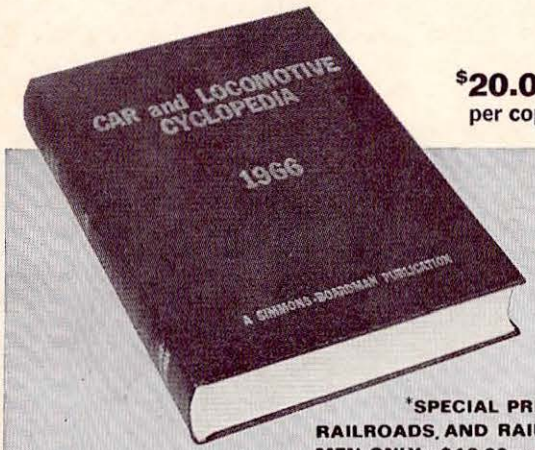

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VIEWPOINT

Tomorrow's freight cars, yesterday's track?

Now that the Presidential-election campaign is in full swing, the air is full of talk about "priorities." That's as it should be. There's much to be done. There's a limit to the resources that can be committed. Decisions have to be made as to what comes first. Bad decisions won't do.

An interesting parallel might be drawn between the politicians' deliberations and those going on in railroad offices as operating and financial people tinker with next year's capital and operating budgets. In railroad offices, too, priorities have to be set. There's much to be done, there's a limit to resources, decisions have to be made as to what comes first—and bad decisions won't do.

The politicians' priorities seem to be shifting—toward greater domestic commitment, though not necessarily away from greater foreign commitment. Railroads' priorities may also shift—toward greater commitment to the fixed plant, though not necessarily away from greater commitment to the equipping of the plant.

Railroads have done a superb job of re-powering and re-equipping. But they get, as an industry, somewhat lower marks for what they've done to improve the plant from the railhead down.

A critic might charge that the industry has superimposed tomorrow's equipment on yesterday's railroad. AAR Vice President Rex Manion puts the problem in more precise terms: Maintenance procedures and track and roadbed programs "have not kept pace with operational developments. . . . Our application of new technology is out of phase."

What has to be done, to put things back into phase? It would be an over-simplification to say that more money would solve all of the maintenance engineer's problems. But more money—the upgrading of M/W priorities—would be a good starting point.

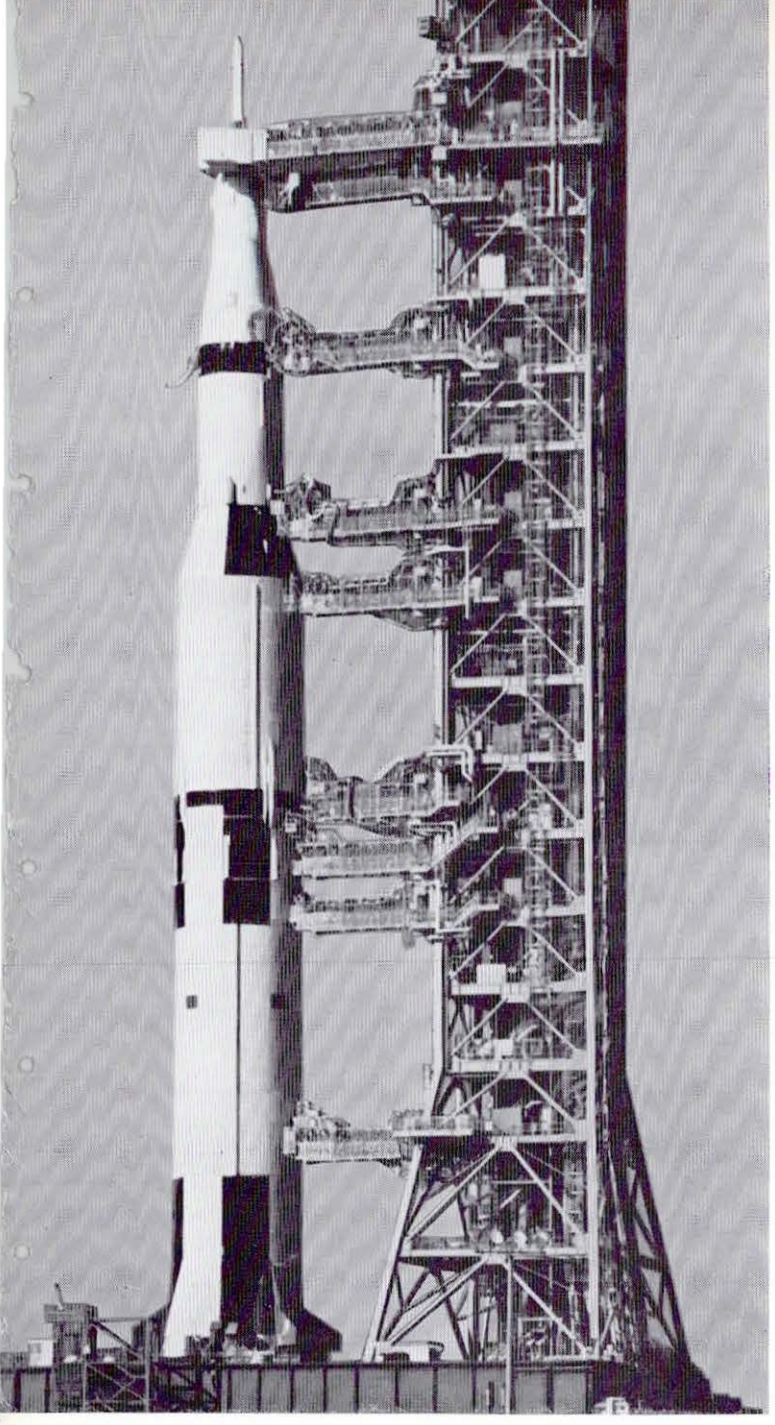
As an industry, railroads spend about 12 cents out of every revenue dollar for maintenance of way and structures. In good years and bad, this figure seems to hold fairly firm. But is this enough?

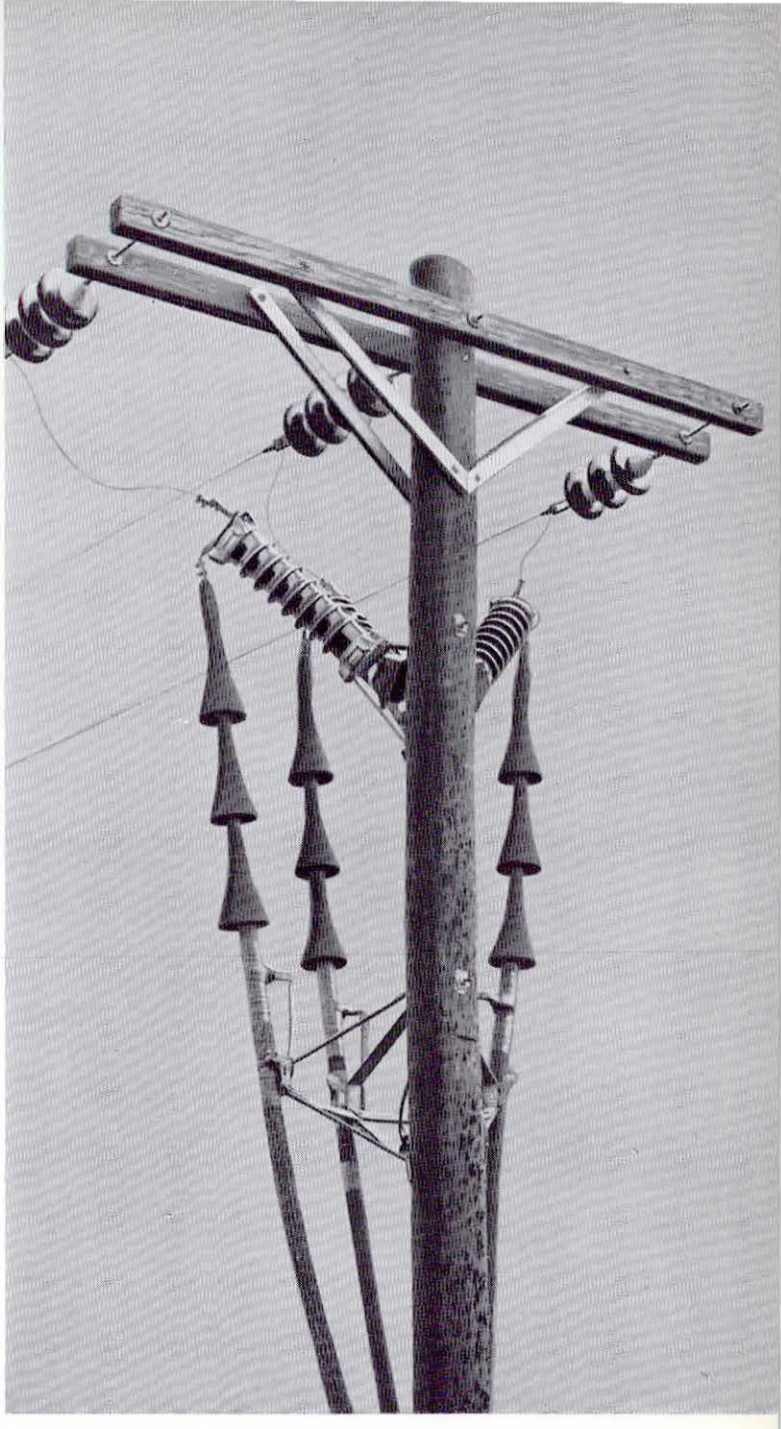
As an industry, railroads spend with less consistency on roadway-and-structures capital projects. In 1961—a bad year— 34% of capital spending was in the fixed-property area. In 1966—the best year of the '60s—the plant got only about 20% of the $1.9 billion laid out. Last year, the figure was 24%, and 1968 probably won't see much change. In absolute dollar terms, the total doesn't change much. But is it enough?

SETTING UP THE RIGHT PRIORITIES

M/W people tend to know, with precision, where they could—and should—spend X thousands of dollars more than they get. But sometimes equipment money is easier to get, or cheaper, than money for fixed plant. Return on investment in equipment may loom larger. Budget priorities, as a result, may reflect more than the sole criterion of need.

Jet airliners don't take off from dirt runways. Forty-foot semi-trailers don't barrel along country lanes. Tomorrow's railroad equipment shouldn't be slogging along on yesterday's track, if such is the case. That's why the priorities, as of '68, are so important.





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